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**Therapeutic
Community:
Advances in
Research
and Application**

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Therapeutic Community: Advances in Research and Application

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Therapeutic Communities and Treatment Research

Frank M. Tims, Nancy Jainchill, and George De Leon

INTRODUCTION

Programs to treat drug abuse and addiction/dependence are a relatively recent innovation. Drug abuse programs emerged in an organized way in the 1960s as a response to this major social and public health problem in the United States. Mainstream organized health care was not prepared, either intellectually or organizationally, to respond to the drug abuse epidemic; thus, an alternative system developed. The growth of treatment facilities in the 1960s and 1970s reflected differing views of the nature of drug abuse and addiction and what was required to treat it effectively. Aside from detoxification units, which were intended to provide the first step in treatment but more commonly provided only a brief respite from the rigors of addiction, three modalities emerged as the dominant treatment types for drug abusers: drug-free outpatient programs; outpatient methadone maintenance programs; and long-term, drug-free residential programs called therapeutic communities (TCs). More recently, short-term residential programs using 12-step or other non-TC approaches have emerged (Institute of Medicine 1990).

TREATING DRUG PROBLEMS

This monograph grew out of a technical review meeting that took place in May 1991. The technical review was convened by the National Institute on Drug Abuse (NIDA) for the purpose of systematically examining the TC modality and the existing body of research on TC treatment, to review and consolidate knowledge about this modality, and to chart future directions in TC research. While the TC is a major modality that is unique in its view and application of treatment, research in this modality also has implications for other modalities; in fact, methods developed in TCs have been applied in other programs (De Leon et al. 1993).

In addition to reviewing the TC research base to guide future lines of investigation, the goal of the technical review was to involve the TC movement's practitioners to the greatest extent feasible. An essential

feature of research on treatment programs and modalities is the active cooperation of practitioners as partners in the research enterprise. These practitioners are in a position to facilitate the research, to offer insights during its planning and conceptualization, to provide guidance on critical issues and questions, and to provide feedback on analytic interpretations. As users of applied research, TC practitioners can help focus research so that it is truly useful.

Thus, it was decided to invite the Therapeutic Communities of America (TCA) to attend the meeting, to form three panels (research, clinical, and administrative), and to report back to the group during the final phase of the meeting. Although the TCA reports are not contained in this monograph, they were useful in developing the recommendations contained in the final chapter.

TC PROGRAMS

TC programs reflect a view of the drug abuse client as having a social deficit and requiring social treatment. This social treatment may be characterized as an organized effort to resocialize the client, with the community as an agent of personal change. There has been much folklore and misinformation about TCs. They are viewed by some as isolated from the mainstream of drug abuse treatment, antagonistic toward medications in drug abuse treatment, and not generally receptive to research. Regarding the first point, TCs have evolved from a self-help perspective as a social movement. Because TCs utilize a social treatment approach, their leaders and practitioners have not tended to have medical credentials. Indeed, given their history and self-help perspective, TC staff (at all levels) have included ex-addicts, social activists, and health professionals.

It should be noted that all drug abuse treatment modalities have evolved in a rather short span of time, and TCs are generally accepted by practitioners in other modalities as a legitimate treatment approach. Existing drug abuse treatment modalities evolved in response to a need that the mainstream health care system was not meeting, and the evolution of these modalities is in the direction of integration. While medications, notably methadone, are not generally part of TC treatment, some TCs permit appropriate use of psychotropic medications under medical supervision, as long as they do not pose a threat to the abstinence norms that are therapeutically important. It also is important to note that,

while many TCs may not have research departments, much of the existing research in the drug abuse literature was carried out in cooperation with TC programs. In fact, some of the early landmark studies on treatment effectiveness were carried out by TC researchers (Collier and Hijazi 1974; De Leon 1984).

TCs tend to share a similar view of the client, an emphasis on structure and hierarchy within the program, a need to isolate the individual from competing influences during treatment, a need for a prolonged period of treatment that is phased and intensive, and clear norms regarding personal responsibility and behavior which form the core of treatment. Learning, accepting, and internalizing these norms is accomplished through a highly structured treatment process that requires active participation by the client in a context of confrontation (to address denial, false beliefs, and defense mechanisms), mutual self-help, and affirmation of program expectations. Thus, as De Leon points out in the following chapter, community is treatment. The therapeutic process involves the group (the community) constantly, but also must involve the individual. An aphorism of the TC movement is, "Only you can do it, but you can't do it alone."

MAJOR AREAS OF FOCUS

Not all residential drug treatment programs are TCs, and it is not clear that all TCs follow the same model. The existing programs that call themselves TCs have an organized movement and both national (TCA) and international (World Federation of Therapeutic Communities) levels. What are the essential characteristics of a TC? De Leon (this volume) has attempted to delineate a general theoretical model of the TC. The TC perspective is reviewed in terms of its view of the disorder, the person, right living, and recovery. Drug abuse is viewed as a disorder of the whole person, and individuals are distinguished along dimensions of psychological dysfunction and social deficits. Recovery is viewed as a developmental process that requires the integration of explicit social and psychological goals.

What distinguishes the TC from other treatment approaches is the purposeful use of the community as the primary method for facilitating growth and change in individuals. There are four dimensions of behavioral (objective) change: The dimensions of community member and socialization are concerned with the individual's social development;

the developmental and psychological dimensions refer to the evolution of the individual in terms of maturity, emotional skills, and identity. The subjective aspects of behavioral change are the individual's essential perceptions and experiences related to the following: (1) circumstances (external pressures); (2) motivation (inner reasons for personal change); (3) readiness (treatment is the only option); (4) suitability (self-perceived match between the person and the treatment); and (5) critical perceptions of self-change (e.g., self-efficacy, self-esteem). Essential experiences include healing experiences (nurturance, physical and psychological safety); subjective learning experiences (self-evaluative perceptions, thoughts, and feelings necessary for achieving internalized learning); and critical therapeutic experiences (e.g., distinctive therapeutic events). The change process in the TC incorporates behavioral and social learning principles with the essential experiences and perceptions as mechanisms in the process. Change is viewed from a behavioral orientation that includes the community as trainer, efficacy training, social role training, and vicarious learning. The stages of change are reviewed and distinguished along three perspectives: recovery, the program, and treatment. The last stage of treatment, integration, is an evolving process that begins in treatment; however, it emerges mainly after separation from the program, which underscores the interrelation between TC influences and broader life experiences. Integration is the last phase of the learning process, which is preceded in order by compliance, conformity, and commitment. A distinctive marker of the integration stage is a change in identity that is perceived by the individual and others. This change in identity reflects the importance of learning that is internalized and that characterizes the integration phase.

In addition to clarifying the TC as a model and recognizing that different varieties exist, it is important to examine a range of questions about client populations served, services and treatment processes, cultural aspects, and outcomes. Issues of planned change and the potential of science to improve the TC modality also are of interest.

Carroll, in his chapter, examines the clinical issues that confront the TC field. He calls for collaborative efforts among researchers, administrators, and clinicians in the design and implementation of studies and interpretation of findings. Some fundamental research issues that need to be considered include: (1) delineation of the guiding principles and practices that distinguish the TC field; (2) the role and impact of integrating professionals into the TC; (3) description of the spectrum of clients in treatment; (4) reassessment of recommended lengths of stay in

relation to client characteristics and the different varieties of treatment experience; and (5) identification and description of the range of treatment and rehabilitative services offered in TCs. Carroll also considers co-morbidity, which he describes as the coexistence of multiple disorders (substance, mental, and physical), to be the rule among drug abusers. Comprehensive, holistic treatment approaches employing multidisciplinary teams within the TC are required to address the multiplicity of needs of today's clients. In addition, the importance of developing new models of addiction and recovery are emphasized. Carroll advocates the use of an "ecological dysfunction" model that views behavior as a function of the reciprocal influence of personal and environmental variables. The value of treatment needs to be demonstrated by utilizing more realistic and informative concepts of success, relapse, and dropout.

The effectiveness of the TC has been addressed in numerous outcome studies (Collier and Hijazi 1974; De Leon 1984; Sells and Simpson 1982). Condelli and Hubbard report the results of outcome research on TC clients in their chapter. They compare the findings from two national studies of TCs; compare the characteristics of clients from TCs with other non-TC long-term residential programs; and assess the relationship between client characteristics, treatment type (TC versus other long-term residential), and posttreatment outcomes. Across studies, results have generally been concordant: Clients who stayed in programs for longer periods of time had lower rates of drug use and criminal behavior and higher rates of employment and school attendance than clients who stayed in programs for shorter periods of time. However, the studies varied in terms of the amount of time they found clients needed to stay in programs to produce these positive outcomes, a finding that may be explained by differences in client populations, program characteristics, and outcome measures themselves.

Comparisons of outcomes for clients in two national evaluations of drug abuse treatments provided further evidence for the effectiveness of TCs. The Drug Abuse Reporting Program (DARP) followup evaluation was conducted using a sample of clients (most of whom were opoid addicts) admitted to treatment during 1969-72. A decade later, a similar study—the Treatment Outcome Prospective Study (TOPS)—was conducted using a sample of clients admitted to treatment during 1979-81. The TOPS evaluation included both opiate addicts and polydrug abusers in the client sample. Both studies found that patterns of pretreatment versus posttreatment drug use and criminality showed

dramatic reductions after treatment, with the more impressive reductions in drug use being found in the TOPS study. However, the DARP clients experienced somewhat greater reductions in arrest and incarceration rates than the TOPS clients.

Admissions to TOPS TCs and other long-term residential programs were compared. Clients entering TCs were more likely to have been non-Hispanic whites and to have had more drug-related problems during the year before admission. Of note is the fact that time in program (TIP) is a primary predictor of outcome among TC clients, but it is not a predictor for admissions to other long-term residential programs. The authors suggest that time spent in programs is at best only a rough indicator of the effects of treatment on clients, and they emphasize the need to focus on variables related to treatment to better understand the relationship between process and outcome.

A central issue in TC evaluation studies has been the retention of clients in treatment. Condelli (this volume) examines client and program variables related to retention. He suggests that certain conceptual and methodological issues have impeded research from being more useful for understanding client attrition from drug treatment programs. A comparison of the three largest studies of retention in TCs and other types of residential programs showed little overlap among predictors of retention across the studies. Condelli suggests that these inconsistent findings are partly by a result of inappropriate comparisons, for example, a heterogeneity of clients and treatment programs and use of different measures of retention. The findings of these and other studies indicate that dynamic client and treatment entry variables are more powerful predictors of retention than fixed client variables.

In their chapter, Lewis and Ross also address the issue of retention and time in treatment. The preponderance of research studies have concluded that there is a positive relationship between the amount of time spent in TC treatment and successful outcome. Lewis and Ross establish a framework for a common language that provides more precise and universally applicable definitions of retention phenomena; review TC-based and other relevant studies of retention phenomena; and identify critical concerns for the TC field that emerge from these findings. They have organized their review of retention studies around pretreatment (e.g., demography, psychopathology, motivation) and within treatment factors (e.g., program characteristics, treatment events). Research investigating the relationship of within treatment variables and retention

has been limited and should be the focus of future large-scale multiprogram studies. The nearly universal finding that treatment outcomes improve as time in treatment increases suggests that researchers should identify factors that are associated with remaining in treatment. However, it also is argued that there are negative corollaries that may accompany reduced attrition (e.g., reduction in the number of clients who are exposed to treatment). The enlightenment model (i.e., retention until graduation) is compared with the compensatory model, which views recovery as a continuous process involving a chronic condition. The authors identify the need to ascertain the optimum balance between retention and treatment.

The central issue of resocialization implies reorienting of perceptions, values, and frame of reference. This frame of reference question can be addressed with regard to a core set of values and expectations that are shared (including those specific to the cultures embedded in particular TCs, such as those oriented toward Hispanics). It is expected that the treatment process will evoke changes in the direction of such shared norms, values, and other common understandings as treatment progresses. Szalay, in his chapter, explores this central aspect of treatment and its ramifications for understanding intended change in treatment programs. He describes the Associative Group Analysis (AGA) method, which focuses on perceptual and attitudinal dispositions and on changes in cognitive organization in systems of mental representation. The systems of subjective representation are charted along three dimensions: perceptions, dominant priorities, and attitudes/evaluations. The systems of addicts and rehabilitated clients can serve as reference groups for determining client status (i.e., how much their thinking resembles the thinking of rehabilitated individuals). A cross-sectional comparison of 200 pretreatment and 200 posttreatment clients at an urban-based TC was used to measure changes in perceptions and attitudes related to drug use. The pretreatment and posttreatment groups yielded different response clusters in response to word stimuli. Szalay suggests three major fields for practical application of the AGA method: (1) to identify individual and treatment variables that are related to client success; (2) to monitor client progress along relevant dimensions, (e.g., self-image, perception of harmful substances); and (3) to provide empirical insights into perceptual and motivational dispositions, which are valuable in therapy and counseling.

The role of psychiatric co-morbidity, which has become so common in drug abuse treatment populations (De Leon 1989; Havassy and

Wasserman 1992; Rounsaville et al. 1982; Schottenfeld et al. 1993), is the focus of the chapter by Jainchill. At one level, it may be seen as a complication of treatment decisions, but it is so ubiquitous that it is viewed as a normal part of the array of treatment tasks. Jainchill suggests that changing trends in drug abuse patterns and drug users seeking treatment have highlighted the importance of considering psychological and psychiatric factors in the treatment of substance abuse. Specific psychiatric disorders, including depression, antisocial behavior, and borderline personality, appear to occur more frequently among drug users. Psychological symptoms, as distinguished from psychiatric disorders established by diagnostic criteria, are generally more transient and often may be situationally induced. The psychological profiles of admissions to TCs reflect high levels of depression and anxiety, poor socialization, deviant Minnesota Multiphasic Personality Inventory (MMPI) profiles, and low self-esteem. Psychological improvement is shown by clients who are reexamined during treatment (De Leon 1984, 1988; Holland 1986). Posttreatment psychological status is related to clients' length of stay in treatment, with greater improvement seen among those who stay in treatment longer (De Leon 1984). Favorable social adjustment also is associated with significant psychological improvement at followup.

The development of a nosological system to classify disturbances descriptively and the development of structured instruments to obtain the diagnoses have facilitated the investigation of the prevalence of psychiatric disorders among substance abuse populations. Jainchill (1989) reports that among 350 admissions to a large urban TC, the large majority had a psychiatric diagnosis at some time in their life, and almost half had a diagnosis in the month prior to entering treatment. The most commonly occurring nonsubstance diagnoses were antisocial personality, psychosexual dysfunction, generalized anxiety, phobias, dysthymia, and major depression. The relationship between psychiatric disorder and retention was complex: Longer staying clients tended to have more history of psychiatric disorder in addition to their substance abuse; however, psychiatric disturbance in conjunction with low-severity substance abuse was negatively associated with retention.

The range of treatment populations that are served by TC programs include some who are treated in specialized programs that are especially tailored to their unique needs, with the expectation that the mutual peer support and other aspects of treatment will be appropriate in terms of form and context. In this volume, Pompi addresses the treatment of

adolescents, and Stevens and Glider discuss the needs of women with children. McCusker and Sorensen review services to human immunodeficiency virus (HIV)-positive individuals in TCs, and Wexler and Love describe the application of the TC model to correctional populations. Inciardi and colleagues also examine the use of the TC in correctional populations, with a special focus on reentry issues.

A 1989 survey of the TCA membership showed that approximately one-fifth of TC admissions were 20 years of age or younger. A review of retention and posttreatment outcome for adolescents in TCs is provided by Pompei (this volume). He summarizes the findings of nine data sets, including multimodality studies such as DARP and TOPS, and single program efforts. TIP varies across the study samples, with the median TIP ranging between 35 and 96 days. However, the planned duration of stay varies among the programs, so that the difference in retention rates is difficult to interpret.

The relationship between adolescent and adult retention rates was inconsistent; some studies showed similar rates, while others reported higher or lower retention for adolescents. Among the studies that reported outcome data, all revealed a positive relationship between TIP and posttreatment outcomes. These outcome studies indicate reduced criminal activity and use of opioid and nonopioid drugs, with the exception of marijuana and alcohol use in one study. In general, adolescents and adults yield similar posttreatment findings. Two other studies reported on factors that appear to be related to retention. Biase (1981) found that higher levels of depression were associated with an increased likelihood of dropping out of treatment, and Weidman (1987) reported data supporting the hypothesis that family involvement in the treatment of adolescents is a potent influence on their retention. The majority of studies reviewed by Pompei (this volume) included adolescents who were clients in programs that also served adults. More recently, TCs have been establishing segregated treatment facilities for adolescents. The question of treatment segregation versus integration of adolescent clients needs to be addressed in future studies.

Stevens and Glider (this volume) summarize the development of specialized programs for women within TCs. Prior to the 1970s, there was little focus on women's treatment issues; however, in 1974, NIDA established a program for women's concerns. In 1976, Public Law 94-371 was passed, granting priority considerations for funding of women's treatment and prevention services. During the middle to late 1980s, the

number of women seeking treatment increased dramatically, the impact of perinatal substance use became a growing concern, and more services to women were made available in response. The number of women stipulated to TC treatment by the legal system underrepresents their involvement with criminal activity, but it probably reflects the legal system's reluctance to mandate women to treatment. Women and men entering treatment show similar psychological problems; however, women generally manifest a greater degree of disturbance, often coupled with histories of incest, molestation, or rape. Nonetheless, women tend to show greater improvement during and following treatment.

Among 25 TCs that responded to a survey in 1990, 11 reported specialized programs for women and children. All of the programs identified the need for parenting education curricula and attention to sexuality and relationship issues, along with other specialized services. Specialized programs for women appear to positively impact length of stay in treatment and increase self-disclosure and the degree of participation in family issues by men. The cost-effectiveness of treatment is highlighted by the financial impact to society in terms of medical costs, the cost of criminal activity, foster care, and educational expenses for children of substance-abusing parents.

McCusker and Sorensen (this volume) discuss the role of TCs in the prevention and control of HIV infection among drug users. The median incubation period between initial infection and development of acquired immunodeficiency virus (AIDS) is 8 to 10 years. Survival after a diagnosis of AIDS is short, particularly among injecting drug users (IDUs) (Harris 1990). TCs can affect primary prevention (i.e., strategies that reduce HIV transmission) because treatment itself increases abstinence and can prepare clients for safer relapse through educational and other interventions (Baker et al. 1993). Treatment and outreach programs need to coordinate efforts to encourage the admission of high-risk individuals. Studies are needed that will evaluate: (1) the effectiveness of health education programs and for whom; (2) the impact of pretreatment HIV status and risky behavior on retention and outcomes; and (3) the effects of treatment on posttreatment HIV-relevant behaviors.

Secondary prevention strategies involve early detection and prompt treatment, which may reduce the morbidity and mortality associated with HIV disease. Studies are needed that compare the effectiveness of different policies (e.g., contacting partners of individuals who test positive) related to HIV antibody testing in TCs. Both the effects of

clients with HIV disease upon the TC and the effects of the TC on the HIV-infected clients need to be examined.

The aim of tertiary prevention is to provide continuing support and care to those with advanced HIV disease, to reduce mortality, and to improve the quality of life. Residential programs recently have begun to address the special problems of treating HIV-infected clients. Research is needed to guide informed modifications to the TC in order to accommodate clients with HIV disease.

Several chapters in this present volume review the effectiveness of TCs in prisons. Wexler and Love examine the history of TCs in prisons, provide a summary of empirical evidence for the effectiveness of TCs in prison, and describe a national technical assistance project (Project REFORM), which has helped to establish new TCs behind prison walls. The first prison-based TC, Aesklepieion, was established in 1969 at the Federal maximum security institution in Marion, IL; it served as a prototype for other programs, all of which have subsequently closed. Common problems included lack of communication with other prison personnel, inadequate supervision, and inadequate staff control. Three lessons from history guided changes in later prison-based TCs: (1) improved communication between TC and non-TC institutional personnel; (2) improved security; and (3) maintenance of control by staff.

The Stay'n Out program, located in two New York State prisons, was the first in-prison TC to be evaluated. Comparisons with other programs were favorable, and the relationship between TIP and outcome (e.g., percent arrested, positive discharge from parole) was established through 1 year in treatment. Field (1989) reports similar findings among participants in Cornerstone, a prerelease treatment program for alcohol- and drug-dependent offenders in Oregon. The TC approach also has been successfully employed with youthful offenders in the Wharton Tract Narcotic Treatment Program in New Jersey (Platt et al. 1980).

Currently, the Federal Bureau of Prisons, in response to the increasing inmate population that also includes an escalating proportion incarcerated for drug offenses, offers a hierarchy of programs of increasing intensity. Project REFORM was established to help State prison systems develop corrections-based drug treatment programs (Wexler et al. 1991). The major goal of Project REFORM, which included 11 State prison systems, was to reduce the amount of crime and drug abuse among incarcerated offenders after their release. Through 1992, Project Recovery extended

offenders after their release. Through 1992, Project Recovery extended and built on the work of Project REFORM. The essential features of in-prison TC programs include: (1) a psychologically safe environment; (2) recognition and incorporation of cultural and ethnic differences; (3) program integrity; (4) maintenance of respectful relations with non-TC inmates; (5) maintenance of discipline; (6) the use of ex-addicts and ex-offenders as program staff; (7) continuity of care; and (8) program evaluation.

Every prison subculture has a system of norms that typically exert a greater influence over prisoners' behaviors than the institution's formally prescribed rules. This prison code often imposes sanctions against reform in general and drug rehabilitation in particular. The TC, as a total treatment environment apart from the rest of the prison population, has more opportunity to succeed than other "inside" drug rehabilitation approaches (Inciardi et al., this volume). The authors suggest that an effective TC intervention would involve a process involving three stages that correspond to the inmate's correctional status (i.e., incarceration, work release, and parole or other surveillance). The primary stage should occur in prison, where there is the time and opportunity for comprehensive treatment. The second stage is a transitional TC, providing a therapeutic and prosocial milieu for individuals on work release. The third stage, when the client is back in the free community, involves counseling, group therapy, and participation in transition program activities.

CREST Outreach Center, established in late 1990, was the first dedicated work-release TC in the Nation, and it was designed to incorporate the three-stage process. The CREST program lasts 26 weeks, and its focus is to prepare clients for employment, independent living, and return to the free community. Over a 5-year grant period, CREST will serve 360 inmates selected from both the general prison population and from the KEY program (Delaware's prison-based TC), providing an important opportunity for comparison of different models (e.g., KEY only and KEY plus CREST).

CONCLUSION

Drug abuse treatment has evolved over a relatively short timespan, with most of the existing programs emerging over the past three decades. A variety of perspectives have guided the development of the modalities

now available, and the TC approach stands in contrast to the medications-based programs such as methadone maintenance and many of the outpatient counseling programs. The TC modality represents a major approach to treatment that emphasizes intensive treatment involving a social perspective and is rooted in a specific view of the disorder, the person, right living, and recovery. It is a high-demand approach, which is not suitable for all clients.

Like other modalities, the TC field has developed and undergone change. The field of drug abuse treatment has become increasingly complex over the past decades, and the TC movement has responded by becoming diversified. The TC has been adapted to a variety of environments, and it has been modified in ways that make it better able to serve the needs of clients who present with a greater range of problems, including child care responsibilities, issues of gender and minority cultures, homelessness, psychiatric co-morbidity, criminal justice involvement, and HIV issues. An important part of the review presented here is to examine the range of clients served, the needs of client populations, and the ways in which the TC field addresses those needs as a dynamic and evolving modality.

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The Therapeutic Community: Toward a General Theory and Model

George De Leon

THE NEED FOR A THERAPEUTIC COMMUNITY THEORY AND GENERAL MODEL

The maturation of the therapeutic community (TC) as a sophisticated human services modality is evident in the broad range of programs that subscribe to the basic TC perspective and approach and serve an estimated 80,000 admissions yearly. These admissions include a wide diversity of clients who use an expanded cafeteria of drugs and present complex social-psychological problems in addition to their chemical abuse.

The TC's basic social learning model has been amplified with a variety of additional services, including family, educational, vocational, medical, and mental health. Staffing compositions have been altered to include increasing proportions of traditional mental health, medical, and educational professionals to serve along with the recovered paraprofessionals (Carroll and Sobel 1986; De Leon, in press; Winick 1991).

Correctional institutions, medical and mental hospitals, and community residence and shelter settings, overwhelmed with alcohol and illicit drug abuse problems, have implemented TC programs within their institutional boundaries (Galanter et al. 1993; Wexler and Williams 1986). TC agencies have incorporated basic elements of its drug-free philosophy and view of "right living" into educational and prevention programs for schools and communities.

The evolutionary changes of the TC in the last decade reveal the vigor, resourcefulness, and flexibility of the modality to adapt to growth and change. However, evolution also highlights the need for a theoretical framework and model to advance research and to guide training, practice, and program development. Currently, this need is most evident in two

related issues: the diversity of programs and the complexity of the treatment process.

The adaptation of TCs for new clients and different settings has resulted in a proliferation of programs with unique treatment protocols and different planned durations of stay; even the long-term traditional model is differentially implemented. The range and extent to which these adapted programs retain the basic elements of the TC model is not known. Moreover, the wide diversity of programs raises questions about the general effectiveness of the TC modality and underscores the need for defining the essential elements of the TC model and method.

Illumination of the treatment process is essential to improving TC treatment. The absence of treatment process information has weakened conclusions concerning the effectiveness of TCs and has obscured efforts to improve treatment. If links cannot be explicitly established between program interventions, the course of client change, and eventual outcomes, the effectiveness of any TC-oriented model remains unclear, much less proven. Modification of existing TC protocols must be guided by an understanding of the relevance and timing of particular program components for different individuals. Knowing why and how individuals change in TCs is a prerequisite for introducing changes in treatment in order to increase retention and favorable outcomes.

This chapter provides a framework for a general theory and model of therapeutic communities, which is elaborated more fully in other writings (De Leon 1991*a*, 1994*a*, in press; De Leon and Rosenthal 1989; De Leon and Ziegenfuss 1986). The formulation presented has evolved from the research and clinical experience obtained in the long-term residential TC, which is commonly viewed as traditional. This model still serves as the prototype for the current diversity of TCs and has documented effectiveness (Anglin and Hser 1991; De Leon 1985; Hubbard et al. 1989; Simpson and Sells 1982).

It should be stressed that the framework presented is not a theory in the formal sense of a systematic account of how and why people change. It does not provide operational definitions for the main concepts; there are no explicit hypotheses, nor are specific cause and effect relationships postulated. The framework organizes the elements (e.g., perspective, concepts, assumptions, and program features) used in the TC *to understand itself*. These elements are judged to be essential toward

characterizing a general model and developing an empirically testable theory.

The first section of this chapter reviews the TC perspective in terms of its view of the disorder, the person, right living, and recovery. It describes the major TC treatment approach, *community as method*, and the main program components of a generic TC model. The second section formulates a framework of the treatment process in the TC in terms of program interventions, the dimensions of individual change, and the stages of change. A paradigm is outlined that incorporates behavioral and social learning principles with perceptions and experiences as mechanisms toward clarifying the change process. The final section offers some implications of the theoretical framework for research in the TC.

THE TC PERSPECTIVE, APPROACH, AND PROGRAM COMPONENTS

The TC can be distinguished from other major drug treatment modalities in two fundamental ways. First, the TC offers a systematic treatment approach that is guided by an explicit perspective on the *drug use disorder, the person, recovery, and right living*. Second, the primary therapist and teacher in the TC is the *community* itself, which consists of the social environment, peers, and staff members who, as role models of successful personal change, serve as guides in the recovery process. Thus, the community is both the context in which change occurs and the method for facilitating change.¹

View of the Disorder

Drug abuse is regarded as a disorder of the whole person. Although individuals differ in their choice of substances, abuse involves some or all of the areas of functioning. Cognitive, behavioral, and mood disturbances appear, as do medical problems; thinking may be unrealistic or disorganized; and values are confused, nonexistent, or antisocial. Frequently there are deficits in verbal, reading, writing, and marketable skills. Finally, whether couched in existential or psychological terms, moral issues are apparent.

Abuse of any substance is seen as behavior with multiple determinants. Physiological dependency is secondary to the wide range of

circumstances that influence and then gain control over an individual's drug-use behavior. Invariably, problems and situations that are associated with discomfort become regular signals for resorting to drug use. For some abusers, physiological factors may be important, but for many these remain minor relative to the behavioral deficits that accumulate with continued substance abuse. Physical addiction or dependency must be seen in the wider context of the individual's psychological status and lifestyle. Thus, the problem is the person, not the drug. Addiction is a symptom, not the essence of the disorder. In the TC, chemical detoxification is a condition of entry, not a goal of treatment. Rehabilitation focuses on maintaining a drug-free existence.

View of the Person

Rather than drug-use patterns, individuals are distinguished along dimensions of psychological dysfunction and social deficits. A considerable number of clients never have acquired conventional lifestyles. Vocational and educational deficits are marked; mainstream values either are missing or unpursued. Most often, these clients emerge from a socially disadvantaged sector where drug abuse is more a social response than a psychological disturbance. Their TC experience can be termed *habilitation*—the development of a socially productive, conventional lifestyle for the first time in their lives.

Among clients from advantaged backgrounds, drug abuse is more directly expressive of psychopathology, personality disturbance, or existential malaise. For these clients, the term *rehabilitation* is more suitable because it emphasizes a return to a lifestyle previously lived, known, and perhaps rejected.

Regardless of social class differences, substance abusers share important similarities. All reveal some problems in socialization, cognitive/emotional skills, and overall psychological development, which is evident in their immaturity, poor self-esteem, conduct and character disorders, or antisocial characteristics. Typical features include low tolerance for all forms of discomfort and delay of gratification; inability to manage feelings (particularly hostility, guilt, and anxiety); poor impulse control (particularly sexual or aggressive); poor judgment and reality testing concerning consequences of actions; unrealistic self-appraisal in terms of a discrepancy between personal resources and aspirations; prominence of lying, manipulation, and deception as coping behaviors; and problems with authority and personal and social irresponsibility (i.e., inconsistency

or failures in completing expected obligations and persistent difficulties in managing guilt). Additionally, significant numbers have marked deficits in education and marketable communication skills.

These clinical characteristics do not necessarily depict an "addictive personality," although many of these features are diagnostic of conduct disorder in the younger substance abuser, which often evolves into adult character disorder. Nevertheless, whether antecedent or consequent to serious drug involvement, these characteristics are observed to be correlated with chemical dependency. More importantly, TCs require a positive change in these characteristics as essential for stable recovery. Thus, all clients in TC-oriented treatment follow the same regime. Individual differences are recognized in specific treatment plans that modify the steps, not the course, of the client's experience in the TC.

View of Right Living

TCs adhere to certain precepts and values as essential to self-help recovery, social learning, personal growth, and healthy living. Some precepts specifically orient the individual to the priority and meaning of self-help recovery. For example, they stress the personal present (here and now) as opposed to the historical past (then and when). Past behavior and circumstances are explored only to illustrate the current patterns of dysfunctional behavior, negative attitudes, and outlook. Individuals are encouraged and trained to assume personal responsibility for their present reality and their future destiny.

The view of right living also emphasizes explicit values that guide how individuals relate to themselves, peers, significant others, and the larger society. These include truth and honesty (in word and deed), the work ethic, learning to learn, personal accountability, economic self-reliance, responsible concern for peers, family responsibility, community involvement, and good citizenry.

The ideological and psychological views of the TC perspective are integrated into its teachings and methods to achieve specific social and psychological goals. For example, the requirement of truth and honesty in all matters counters the manipulation and deceitful character features of many substance abusers; the values of accountability and social responsibility are integral teachings in training and socialization. Acquiring vocational or educational skills and social productivity can be motivated by the values of achievement and self-reliance; healthy

behavioral alternatives to drug use are reinforced by a commitment to the values of abstinence. In general, sobriety is a prerequisite for learning to live right, but right living is required to maintain sobriety.

View of Recovery

The aims of treatment are global in the TC. The primary psychological goal is to change the negative patterns of behavior, thinking, and feeling that predispose drug use; the main social goal is to develop a responsible, drug-free lifestyle. Stable recovery, however, depends on a successful integration of these social and psychological goals. Behavioral change is unstable without insight, and insight is insufficient without experience. Thus, conduct, emotions, skills, attitudes, and values must be integrated to ensure enduring lifestyle changes and a positive personal social identity. The social and psychological goals of the TC shape its treatment regime as well as define several broad assumptions concerning its view of recovery.

Recovery Is a Developmental Process. Change in the TC can be understood as a passage through stages of incremental learning. The learning that occurs at each stage facilitates change at the next, and each change reflects movement toward the goals of recovery.

Motivation. Recovery depends on both positive and negative pressures to change. Some clients seek help, driven by stressful external pressures; others are moved by more intrinsic factors. For all, however, remaining in treatment requires continued motivation to change. Thus, elements of the rehabilitation approach are designed to sustain motivation or detect early signs of premature termination. Although the influence of treatment depends on the individual's motivation and readiness, change does not occur in a vacuum. Rehabilitation unfolds as an interaction between the client and the therapeutic environment.

Self-Help and Mutual Self-Help. Treatment is not provided but made available to the individual in the TC environment through its staff and peers and the daily regime of work, groups, meetings, seminars, and recreation. However, the effectiveness of these elements is dependent upon the individual, who must fully engage in the treatment regime. Self-help recovery means that the individual makes the main contribution to the change process. Mutual self-help also emphasizes the fact that each individual in the process contributes to the change in others. The main messages of recovery, personal growth, and right living are

mediated by peers through confrontation and sharing in groups, by functioning as role models, and as supportive friends in daily interactions.

Social Learning. Negative behavioral patterns, attitudes, and dysfunctional roles were not acquired in isolation, nor can they be changed in isolation. Therefore, recovery depends not only on what has been learned but on how, where, and with whom learning occurs. This assumption is the basis for the community itself serving as healer and teacher. Learning occurs by doing and participating as a community member; a socially responsible role is acquired by acting the role. Thus, changes in lifestyle and identity are gradually learned through participating in the varied roles of community life, supported by the people and relationships involved in the learning process. Without these relationships, new ways of coping are threatened by isolation and the potential for relapse. Thus, a perspective on self, society, and a life philosophy must be affirmed by a network of similar others to ensure a stable recovery.

The TC Approach: Community as Method

The quintessential element of the TC is community. What distinguishes the TC from other treatment approaches (and other communities) is the *purposive use of the community as the primary method for facilitating social and psychological change in individuals.*²

Community as method means integrating people and practices under a common perspective and purpose to teach individuals to use the community to learn about and change themselves. Thus, all TC activities are designed to produce therapeutic and educational change in the participants, and all participants are mediators of these therapeutic and educational changes. The following specific features are distinctive to the community-as-method model.

Use of Participant Roles. Individuals contribute directly to all activities of the daily life in the TC, which provides learning opportunities through engaging in a variety of social roles (e.g., peer, friend, coordinator, and tutor). Thus, individuals are active participants in the process of changing themselves and others.

Use of Membership Feedback. The primary source of instruction and support for individual change is the TC membership. Providing

observations and authentic reactions to the individual is the shared responsibility of all participants.

Use of the Membership as Role Models. Each participant strives to be a role model of the change process. Along with their responsibility to provide feedback to others regarding what they must change, members also must provide examples of how they can change.

Use of Collective Formats for Guiding Individual Change. The individual engages in the process of change primarily with his or her peers. Educational, training, and therapeutic activities occur in groups, meetings, seminars, job functions, and recreation. Thus, the learning and healing experiences that are essential to recovery and personal growth unfold in a social context and through social intercourse.

Use of Shared Norms and Values. Rules, regulations, and social norms protect both the physical and psychological safety of the community. However, there are beliefs and values that serve as explicit guidelines for self-help recovery and right living. These guidelines are expressed in the vernacular and the culture of each TC and are mutually reinforced by the membership.

Use of Structure and Systems. The organization of tasks (e.g., the varied job functions, chores, and management roles) needed to maintain the daily operations of the facility is a main vehicle for teaching self-development. Learning occurs not only through specific skills training but in adhering to the orderliness of procedures and systems, in accepting and respecting supervision, and in behaving as a responsible member of the community upon whom others are dependent.

Use of Open Communication. The public nature of shared experiences in the TC is used for therapeutic purposes. The private inner life, feelings, and thoughts of the individual are matters of importance to the recovery and change process, not only for the individual but for other members. Thus, all personal disclosure eventually is shared.

Use of Relationships. Friendships with particular individuals, peers, and staff are essential to encourage the individual to engage and remain in the change process. The relationships developed in treatment are the basis for the social network needed to sustain recovery beyond treatment.

The Generic TC Model: Basic Components

The TC perspective on the disorder, the person, recovery, and right living and its distinctive approach, the use of community as method, provide the conceptual basis for defining a generic TC program model in terms of its basic components. These components are adapted in different ways and in various settings, both residential and nonresidential.

Community Separateness. TC-oriented programs have their own names, often innovated by the clients, and are housed in a space or locale that is separate from other agency or institutional programs or units and from the drug-related environment. In the residential settings, clients remain away from outside influences 24 hours a day for several months before earning day-out privileges. In the nonresidential "day treatment" settings, the individual is in the TC environment for 4 to 8 hours and then is monitored by peers and family. Even in the least restrictive outpatient settings, TC-oriented programs and components are in place. Clients gradually detach from old networks and relate to drug-free peers in the program.

A Community Environment. The inner environment of a TC facility contains communal space to promote a sense of commonality and collective activities (e.g., groups, meetings). The walls display signs that state the philosophy of the program—the messages of right living and recovery. Corkboards and blackboards identify all participants by name, seniority level, and job function in the program, and daily schedules are posted. These visuals display an organizational picture of the program that the individual can relate to and comprehend, which promotes affiliation.

Community Activities. Treatment or educational services must be provided within a context of the peer community to be effective. Thus, with the exception of individual counseling, all activities are programmed in collective formats. These activities include at least one daily meal prepared, served, and shared by all members; a daily schedule of groups, meetings and seminars, team job functions, and organized recreational and leisure time; and ceremonies and rituals (e.g., birthdays and phase/progress graduations).

Staff Roles and Functions. The staff members are a mix of recovered professionals and other traditional (e.g., medical, legal, mental health, and educational) professionals who must be integrated through cross-training

that is grounded in the basic concepts of the TC perspective and community approach. Professional skills define the function of individual staff (e.g., nurse, physician, lawyer, teacher, administrator, case worker, or clinical counselor). Regardless of professional discipline or function, however, the generic *role* of all staff is that of community members who are rational authorities, facilitators, and guides in the self-help community method.

Peers as Role Models. Clients who demonstrate the expected behaviors and reflect the values and teachings of the community are viewed as role models. Indeed, the strength of the community as a context for social learning relates to the number and quality of its role models. All members of the community are expected to be role models—roommates; older and younger residents; and junior, senior, and directorial staff. TCs require these multiple role models to maintain the integrity of the community and to ensure the spread of social learning effects.

A Structured Day. The structure of the program relates to the TC perspective, particularly the view of the client and recovery. Ordered, routine activities counter the characteristically disordered lives of these clients and distract them from negative thinking and boredom, which can predispose drug use. Structured community activities also facilitate the learning of self-structure for the individual in time management, planning, setting and meeting goals, and general accountability. Thus, regardless of its length, each day has a formal schedule of varied therapeutic and educational activities with prescribed formats, fixed times, and routine procedures.

Phase Format. The treatment protocol, or plan of therapeutic and educational activities, is organized into phases that reflect a developmental view of the change process. The emphasis is on incremental learning at each phase, which moves the individual to the next stage of recovery.

Work as Therapy and Education. Consistent with the TC's self-help approach, all clients are responsible for the daily management of the facility (e.g., cleaning activities, meal preparation and service, maintenance, purchasing, security, coordinating schedules, and preparatory chores for groups, meetings, seminars, and activities). In the TC, the various work roles mediate the essential educational and therapeutic effects. Job functions strengthen affiliation with the program

through participation, provide opportunities for skills development, and foster self-examination and personal growth through performance challenge and program responsibility. The scope and depth of client work functions depend upon the program setting (e.g., institutional versus free-standing facilities) and client resources (level of psychological function and social and life skills).

TC Concepts. There is an organized curriculum for teaching the TC perspective, particularly its self-help recovery concepts and view of right living. The concepts, messages, and lessons of the curriculum are repeated in the various groups, meetings, seminars, and peer conversations as well as in readings, signs, and personal writings.

Peer Encounter Groups. The main therapeutic group is the encounter group, although other forms of therapeutic, educational, and support groups are utilized as needed. The minimal objective of the peer encounter group is similar in TC-oriented programs—to heighten individual awareness of specific attitudes or behavioral patterns that should be modified. However, the encounter process may differ in the degree of staff direction and intensity, depending on the client subgroups (e.g., adolescents, prison inmates, or the dually disordered).

Awareness Training. All therapeutic and educational interventions involve raising the individual's consciousness of the impact of his or her conduct and attitudes on themselves and the social environment and conversely the impact of the behaviors and attitudes of others on themselves and the social environment.

Emotional Growth Training. Achieving the goals of personal growth and socialization involves teaching individuals how to identify feelings, express feelings appropriately, and manage feelings constructively through the interpersonal and social demands of communal life.

Planned Duration of Treatment. The optimal length of time for full program involvement must be consistent with the TC's goals of recovery and its developmental view of the change process. How long the individual must be in the program depends on their phase of recovery, although a minimum period of intensive involvement is required to ensure internalization of the TC teachings.

Continuity of Care. Completion of primary treatment is a stage in the recovery process, and aftercare services are an essential component in the

TC model. Whether implemented within the boundaries of the main program or separately as in special halfway houses, the perspective and approach guiding aftercare programming must be *continuous* with that of primary treatment in the TC. Thus, the views of right living and self-help recovery and the use of a peer network are essential to the appropriate use of vocational, educational, mental health, social, and other typical aftercare or reentry services.

The use of community as method assumes that individual receptivity and willingness to learn and change is fostered by an affiliation with others engaged in a similar struggle to change (De Leon 1991a). Thus, the basic components in TC-oriented programs focus upon strengthening the *perception of community* among all participants, staff, and clients. However, creating and sustaining the perception of community is a constant challenge for the TC-oriented programs that serve a wide diversity of populations in various settings. Thus, the range and implementation of the basic TC components are flexible and reflect the need for constant innovation.

THE TREATMENT PROCESS IN THE TC

A framework for understanding the process of change in the TC reflects its perspective, approach, and model. A disorder of the whole person means that change is *multidimensional*. Thus, change must be viewed along several dimensions of behavior, perceptions, and experiences. The main approach for facilitating change is the use of the community as method, which consists of *multiple interventions*. Recovery unfolds as developmental learning, which can be described in terms of characteristic *stages of change*. The following section outlines the main elements of a process framework as well as the interventions, dimensions, perceptions, experiences, and stages of change.

Interventions

In the TC, *all* activities are designed to produce therapeutic and educative effects. These activities, singly and in various combinations, constitute *interventions* that directly and indirectly impact the individual in the change process. Indeed, it is this element of using every activity for teaching or healing that illustrates the meaning of community as method. Illuminating the complexity of TC interventions can be approached through a classification of the range of activities and a description of their

characteristics. The diverse community activities that are basic to the TC model can be organized into three main classes of interventions: *therapeutic and educative effects, community and clinical management, and community enhancement.*

Therapeutic and Educative Effects. These activities consist of various group formats as well as individual counseling. They promote the expression of emotions, divert negative acting out, permit ventilation of feeling, resolve personal and social issues, increase communication and interpersonal skills, examine and confront behavior and attitudes, and offer instruction in alternate modes of behavior. The main groups are encounters, probes, tutorials, and marathons. These activities are amplified by special theme groups that focus on issues related to ethnicity, gender, and age.

Community and Clinical Management. These activities maintain the physical and psychological safety of the environment and ensure that resident life is orderly and productive. They protect the community as a whole and strengthen it as a context for social learning. The main activities/interventions are privileges, disciplinary sanctions, house surveillance (house run), and urine testing.

Community Enhancement. These activities facilitate the individual's assimilation into the community and strengthen their perception of community and therefore its capability to teach and to heal. They include the four main facilitywide meetings: the morning meeting; seminars; the house meeting held each day; and the general meeting, which is called when needed. Ceremony and rituals also are regular facilitywide events that enhance community. These include deaths, birthdays, phase/progress landmarks, and program and school graduations. Finally, certain national and ethnic/cultural holidays are celebrated by all members with seminars, special meals, music, and plays.

Additional Activities and Interventions. These consist of a variety of activities that are not distinctive to the TC model, although they are ancillary or supplemental to the community interventions. They include relapse prevention training; special skills groups such as parenting; various academic, social, and educational groups; and vocational and life skills training groups.

Characteristics of Interventions. All TC activities constitute interventions that are delivered by different people in various settings.

How, where, and for whom these interventions are delivered can be organized in terms of the following broad characteristics: interactive, formal and informal, community, and individually oriented.³

Interactive Interventions. The impact of particular interventions may be enhanced, delayed, or moderated in their interaction with other activities. For example, the messages delivered in seminars may be clarified by informal peer conversations preceding and following the seminars, or an individual's acceptance of the observation made in the encounter group may not occur until he or she observes and confronts the same behavior in another member in a later encounter group. Thus, separate and various combinations of activities are required for some duration, intensity, and frequency to produce individual change.

Formal and Informal Interventions. Activities may be planned or unplanned, occur in designated or arbitrary settings, and be mediated by staff or residents. Typical planned activities are the scheduled groups and meetings and one-to-one counseling sessions conducted by staff or by residents under staff supervision. Many interventions are unplanned and informally mediated in the daily peer interactions. Residents are expected to monitor and instruct other residents in matters of security, rules, regulations, role model expectations, social manners, and civility. Finally, personal disclosures and mutual sharing are spontaneous and constantly occurring interventional activities.

General Community Interventions. Although all interventions are intended to change the individual, some may be delivered directly to the person and others indirectly to the community. General community interventions comprise the schedule of planned activities, including meetings, groups, seminars, job functions, and community meals directed to the general membership. They are not contingent upon any specific event or problem in the community, and their impact depends on the daily participation of the membership.

Specific Community Interventions. These interventions are not routinely scheduled; they are specifically dependent upon community needs. For example, community "pull-ups" (corrective reminders to the membership), house bans, general meetings, special recreational events, and communitywide retreats are implemented to address specific issues of the general membership, such as problems to be corrected and needs for inspiration or affirmation. These specific interventions may be signaled by actual or anticipated events or problems in the general community,

such as unexpected dropouts, violence, drug use, poor participation, or low morale.

Specific Individual Interventions. Certain interventions are specifically contingent upon the individual's behavior. These may be delivered by peers as pull-ups, confrontations, affirmations, suggestions, or instructions that occur both in and outside the clinical groups. They also may be delivered by staff as privileges, job changes, phase changes, one-on-one brief or extended counseling sessions, verbal reprimands, or various disciplinary sanctions.

Although interventions may be targeted to specific individuals, they are delivered in a community context. For example, disciplinary consequences that are devised and implemented by staff are informed by the observations of peers. Peer involvement elevates both the incident and the corrective intervention to a communitywide teaching. In this way, the individual, the peers, and the general membership are collectively *accountable* for the conduct of the community.

Dimensions of Change

Partitioning the individual into separate dimensions is a somewhat artificial device that is analogous to attempts at classification of the TC milieu into separate interventions. Thus, a complete description of change in the whole person includes both the *objective* behavioral dimensions as well as *subjective* changes reflected in self-perceptions and experiences. These are discussed separately for purposes of clarity.⁴

Behavioral change can be described along four broad dimensions that reflect the TC perspective. The dimensions of *community member* and *socialization* refer to the social development of the individual, specifically as a member in the TC community and generally as a prosocial participant in the larger society. The *developmental* and *psychological* dimensions refer to the evolution of the individual as a unique person in terms of their basic psychological function, personal growth, and identity. Each dimension refers to the same individual from different aspects in terms of observable behavioral indicators.

Community Member. This dimension refers to the evolution of the individual as a member in the TC community. It can be described in two related domains—*affiliation* and *role model*. The behavioral indicators in these domains reflect how much the individual utilizes the community as

method and how well they exhibit the behavioral expectations of the community. Those members who are affiliated understand the TC perspective and the philosophy of the program, and they transmit and illustrate the concepts of recovery and right living.

Socialization. This dimension refers to the evolution of the individual as a prosocial member of the larger society. It can be described in three related domains—*social deviancy*, *habilitation*, and *right living*. The behavioral indicators in these domains reflect the individual's repertoire of mainstream social skills, attitudes, and values. For most clients in TCs, a prosocial lifestyle has been rejected, was never acquired, or has eroded with continued drug use. Thus, life in the TC permits the acquisition or reacquisition of a socialized lifestyle.

Developmental. This dimension refers to the evolution of individuals in terms of their personal growth. It can be described in two related domains—*maturity* and *responsibility*. The behavioral indicators in these domains center on self-regulation (e.g., impulses and delaying gratification); social management (in relations with staff/authorities, peers, and the community); and consistency in meeting obligations to self and others.

Psychological. This dimension refers to the basic cognitive and emotional skills that underlie change in the other dimensions. The behavioral indicators of these skills are grouped under two domains—*cognitive skills* (i.e., awareness, judgment, insight, reality, and decisionmaking) and *emotional skills* (i.e., communication and management of feeling states). Without improvement in faulty cognitive and emotional skills, affiliation as a community member, enduring change in socialization, and developmental maturity are not possible. A third psychological domain consists of typical signs or symptoms of emotional and mental disturbance.

Characteristics of the Dimensions

Change or improvement in all of the previously discussed dimensions must occur to ensure a stable recovery. There are characteristics, however, that underscore the complexity of individual differences and the dynamic nature of the change process itself. These can be summarized as *interrelated*, *interactive*, *variable*, *asymmetrical*, and *individualized* dimensions.

Interrelated. The domains of each dimension share common behavioral indicators. For example, some indicators of role modeling may be the same as those of maturity, and some maturity indicators are those of socialization. However, it is the organization of the indicators that defines the domains and distinctions across the dimensions.

Interactive. The dimensions may be mutually influential. For example, changes in community membership (e.g., role modeling) may facilitate those in the developmental dimension (e.g., maturity). Also, increased awareness, a basic skill in the psychological dimension, is a prerequisite for changes in all other dimensions.

Variable. Within a domain, not all behaviors change at the same rate. In the domain of maturity, for example, the resident may show a reduction in cursing but continue to talk back to staff. Within the psychological domain, awareness may be raised concerning the consequences of negative behavior before the behavior itself changes.

Asymmetrical. Across domains and dimensions, the *rate* of change is not necessarily correlated. For example, the resident may improve in role modeling more quickly than in maturity.

Individualized. Individual differences are the rule with respect to change on any dimension. Not all residents start at the same place on the dimension, nor do they progress in a uniform way. Although members are expected to arrive at certain points in the treatment process, individual rates of change vary. These differences can be accommodated within limits if the program focuses on the *fact* of change rather than on the magnitude of change and on the individual's willingness to continue in the process.

Essential Perceptions and Experiences

Although the TC is behaviorally oriented, the process of change is understood by the participants in subjective terms, perceptions, and experiences. Individuals not only actively engage in the behaviors and attitudes to be changed, they must *feel the feelings* associated with this engagement, *understand* the meaning or value of the change, and come to *see* themselves, others, and the world differently. Perceptions and experience are viewed as subjective aspects of behavioral change. Although they may be considered as dimensions or domains, they are

described separately for purposes of illuminating their distinctive contribution to the process.⁵

As ongoing events, perceptions and experiences can be defined on a moment-to-moment basis leading to an endless listing of such events. The qualifier terms *essential* and *critical* underscore those particular perceptions and experiences that staff, residents, and observers agree are *necessary* for the individual to remain in and benefit from the treatment process.

Classification of Essential Perceptions

Although community life in the TC contains an omnipresent message to "stay the course," residents constantly struggle to remain in the treatment situation. How they perceive their problems, progress, peers, staff, the program environment, treatment demands, and outside influences demands contemplation to continue in the process, almost on a daily basis. These perceptions can be grouped under the following themes: *circumstances, motivation, readiness, and suitability.*

Circumstances. A number of life situations and conditions can drive people to seek treatment in TCs. They display *fears and worries* concerning legal, fiscal, health, family, social, domestic, and employment problems. Typically, individuals report explicit fears of jail or the court process, injury, violence, drug overdose, illness, or death. Other fears and anxieties are associated with actual or anticipated losses (such as employment, school, family, and relationships) or of simply being homeless and destitute. Although these various conditions differ across individuals and may change over time for the same individual, they are all perceived as some form of *external pressure* that compels the individual to seek admission to, remain in, or leave the treatment situation.

Motivation. In contrast with perceptions of external conditions, individuals are motivated or moved to seek and remain in treatment by various inner reasons for *personal change*. These reasons are based on both positive and negative perceptions of themselves and their life options. Typically, positive perceptions are expressed in terms of self-efficacy, possibilities, desire for a new lifestyle and to attain the good things in life, or for personal growth or better social and family relationships. Negative perceptions are expressed in more self-deprecating terms, such as desire to abate or eliminate feelings of guilt,

self-hatred, or personal despair based on hurting and failing themselves or others. Intrinsically motivated individuals come to perceive that they are the problem, rather than the drugs or their life circumstances, and they learn to accept that they must change, not the world around them.

Readiness. Individuals who come to TCs may be motivated to change, but many have not accepted the necessity for treatment. Those who are *ready for treatment* have rejected all other options for change; that is, they perceive treatment as their only alternative. Motivated individuals who are *not specifically ready* to engage in the treatment process may perceive nontreatment alternatives as viable, such as managing their own problems through self-control; making situational changes in employment, relationships, or geographic location; or getting help and support from religion, family, or friends.

Suitability. Residents in the TC may be motivated and ready for treatment but do not perceive the TC as appropriate for their needs. Thus, suitability is the *self-perceived match* between the individual and TC treatment. Suitability for treatment in the TC is indicated by the resident's acceptance of the TC approach: its goals, philosophy, and teachings (e.g., commitment to a drug-free lifestyle involving changes in behavior, attitudes, and values of right living); its daily regime (e.g., community living, lack of privacy, privileges and sanctions, and rules and regulations); its social learning methods (work as education and therapy, peer interaction, group participation, and personal disclosure) and its long-term time commitment (interrupting one's life during the residential treatment period).

Characteristics of the Essential Perceptions

The characteristics of the four classes of perception are similar to the dimensions of change in that they are *interrelated* or *interdependent*. For example, readiness for treatment cannot occur without motivation, and suitability for a particular treatment such as the TC is unlikely in an individual who is not ready to engage in any treatment.

Extrinsic circumstances or pressures often induce or clarify intrinsic motivation. For example, repeated problems with the law, health, employment, and social and family relationships eventually lead many individuals to acknowledge their problems with drugs and their need to change themselves. However, although extrinsic pressures may bring the

individual to treatment, it is intrinsic motivation that sustains continued participation in the process.

A third characteristic of these perceptions is their *changeability*. Shifts in motivation, readiness, and suitability can occur daily. Residents continually make decisions concerning their reasons for treatment and their needs for a long-term residential program. These shifts reflect the attractions and pressures from outside the program, such as friends, family, social, and employment circumstances. They also relate to the influences inherent in residential life, such as positive and negative interactions with peers and staff, program demands, and boredom with the daily regime.

Treatment progress also can have unpredictable effects on motivation, readiness, and suitability. Rapid improvement in the early days of treatment, for example, could result in premature dropout. Paradoxically, a transient sense of well-being could lessen motivation or readiness to continue in treatment ("flight into health"). The resident may stop feeling bad, conclude that he or she can handle their problem on their own, and no longer perceives the necessity for treatment. Conversely, delayed or slow improvement may lead to demoralization, weaken readiness to continue, and result in early dropout, particularly in individuals who cannot delay gratification.

Ironically, important changes in perceived suitability for the TC occur *after* individuals actually encounter the demands of the community environment. For example, they may see themselves as different from others in terms of their drug use or their cultural and social background, or they may view the program negatively and its demands as too harsh or lacking in sufficient personal attention. Such *perceptions of mismatch* between the individual's needs and the program's approach can lead to premature dropout.

Much of the effort in TC programs is aimed at monitoring and modifying these perceptions, which shift continually throughout the resident's tenure in residence. Peers and staff attempt to sustain the individual's motivation and reaffirm the suitability of the TC by helping the individual reassess and minimize the importance of outside influences, by reminding them of the gains made and the problems that still need to be addressed, and why he or she needs to be in the TC.

Critical Perceptions

Certain self-perceptions appear to be critical in the change process. These are reported as a distinct awareness of positive self-change *in contrast* with past self-perceptions. These contrasts simply may be residents seeing themselves as behaving, thinking, and feeling differently, usually in statements of self-efficacy and self-esteem. More dramatic contrasts may be a self-perceived change in identity, expressed in terms of being oneself, being real, or not being the person they once were.

Perceptual contrasts may occur in encounter groups or marathons as an element in the high-impact critical experience (i.e., therapeutic events referred to earlier). They also may arise in other special circumstances away from the program, such as day trips or weekend furloughs. These situations provide the individual with explicit opportunities for making comparative observations and confirming personal changes with respect to how they experience the old neighborhood, the proximity of drugs and users, or how they relate to friends, family, and children.

More often, the cues for contrasts are ordinary, emerging in the various roles and everyday activities of the community (e.g., seeing younger or newer residents who are earlier in the process, listening to a seminar, handling a stressful or provocative situation with peers or staff in a new constructive way, managing feelings differently, or simply noting the absence or reduced frequency of old thinking about drugs and related matters).

Although they are distinctive, contrasts usually represent the summation of smaller unperceived changes in behaviors, thinking, and feelings (i.e., "kindling"), which finally culminate in the individual's clear recognition and acceptance of self-change. Regardless of how and when they occur, however, perceptual contrasts are integral to the TC process. Behavioral and cognitive change is unstable if residents cannot discriminate; that is, perceive and authentically acknowledge *where they were, where they are, and where they want to be*.

Classification of Essential Experiences

As with perceptions, a limited array of experiences are underscored which appear as necessary to the change process within the TC. These can be conceptualized under three themes—*healing experiences, subjective learning experiences, and critical experiences as therapeutic events*.

Healing Experiences. Healing refers to palliating or lessening feelings of emotional pain in its various forms. Fears, anger, guilt, hurt, confusion, despair, desperation, hopelessness, and aloneness are some of the pains common to residents in TCs. These are associated with specific circumstantial stress, pressures, and threats as well as longer term psychological injuries and personal and social isolation. The healing experiences can be organized under several themes that reflect the TC perspective: *nurturance-sustenance*, *physical and psychological safety*, and *social relatedness*.

Nurturance-Sustenance. These experiences include the basic provisions of daily maintenance: three meals, housing, clothing, cosmetic accessories, medical, dental, and social and legal advocacy services. These provisions are entitlements rather than privileges for which nothing is asked of the client except that they participate in the treatment regime. The nurturant experiences are primarily those of *relief* from circumstantial pressures, distress, and uncertainties.

Physical Safety. For those who have characteristically lived with fears and anxieties associated with their drug abuse lifestyle, street life, domestic violence, and sexual and interpersonal abuse, physical safety provides an essential healing experience. The TC community maintains strict adherence to cardinal rules against violence, threats of violence, stealing, sexual abuse and harassment, and drug or alcohol use. The security of the facility with respect to daily traffic and unauthorized intrusion is steadfastly maintained. Moreover, maintenance of the rules governing personal security is the responsibility of the residents as well as the staff. Thus, the code of the TC is collective security, which provides *relief* from common fears and anxieties associated with physical safety.

Psychological Safety. Although many individuals in TCs have lived precariously, rebelliously, or antisocially, they are psychologically fearful of facing themselves, other people, the demands of ordinary living, and of change itself. Facing these fears requires trusting others to support their psychological risk-taking. For most residents in the TC, the dissolution of mistrust is a profound healing experience that relieves covert, but long-standing intrapersonal and interpersonal fears. The essential experiences reflecting psychological safety are blind faith, trust, being understood, and being accepted by others.

Social Relatedness. The past social relationships of residents in TCs often are characterized by personal isolation or attachments with others

that are unhealthy or frankly self-destructive. Family histories tend to be marked by disturbance, abuse, and deprivation. Even among those from socially advantaged backgrounds and intact families, their loss of self-control and disordered lifestyle have alienated them from significant others. For many this alienation precedes their drug problems and they have marginal identification with any family or community and no real friendships. The essential social experiences that reflect their relationships with others include *identification*, *empathy*, and *bonding*.

Subjective Learning Experiences. Change in the TC occurs through trial and error learning. This involves behavioral changes followed by objective consequences (e.g., disciplines or rewards) as well as experiential or subjective *outcomes* associated with these consequences. Typically, these experiences involve self-evaluative perceptions, thoughts, and feelings. For example, when residents revert to undesirable behaviors leading to disciplinary actions and social disapproval, experiential consequences may occur on the theme of *self-rejection* (e.g., disappointment, worthlessness, failure, and guilt). When they engage in effective behaviors, positive subjective outcomes may occur on the theme of *self-efficacy* (e.g., confidence, satisfaction, mastery, and self-esteem).

When residents *feel*, as well as think about the effects of consequences, learning (or unlearning) is more stable. For example, the positive socialization rewards of privileges, job promotions, and peer recognition occur *only if* residents experience them as positive events. Similarly, disciplines, demotions, or bans are effective teaching consequences *if* they are experienced in a negative way by the resident. Subjective outcomes are viewed as essential in the change process, specifically for achieving *internalized learning*; that is, behavior change that is maintained by fewer external consequences and more self-control.

Critical Experiences as Therapeutic Events

The change process is erratic, gradual, and incremental. However, the course is punctuated by distinctive moments of individual change that involve a total or *critical* experience involving related thoughts, perceptions, feelings, and understanding. Critical experiences mark *therapeutic events* because they are remembered occurrences that appear to singularly facilitate individual change in behavior (e.g., effective ways of coping and responding); insight (e.g., new understanding of the relationship between self and influences); and commitment (e.g.,

redecisions to continue in the process). Conversions, for example, are special cases of dramatic change that involve one or more therapeutic events.

Although these experiences appear to be sudden, they usually represent developing changes up to the point of their occurrence. Occasionally, however, they occur as isolated incidents of "personal breakthrough." These events often are unplanned and spontaneous, although programs attempt to induce them at appropriate clinical points. For example, intense group marathons, special retreats, or wilderness activities can promote dramatic bonding or self-efficacy experiences that can sustain individuals in the treatment process.

Therapeutic events or moments *link* previous learning with current learning, which in turn mediates new learning. For the individual, they often represent a point of reframing their problems, life options, and self-perceptions. Although they may involve painful feelings, they are reported as positive experiences that motivate the individual to continue in the process.

Characteristics of the Essential Experiences

The essential experiences are *interdependent* and *interrelated* characteristics that illuminate how experiences contribute to the change process. A resident may first experience blind faith before fully experiencing trust. Without trust, there is no meaningful self-disclosure, which is the basis for experiencing understanding and acceptance.

There also is an interrelationship between behavioral learning and healing experiences. Residents who experience trust, understanding, acceptance, or bonding are more likely to remain in treatment and engage in the behaviors that lead to the subjective outcomes that facilitate internalized learning. Moreover, healing experiences are positive subjective outcomes that directly reinforce the social behaviors that result in these experiences. For example, residents who personally disclose to others obtain the positive experience of understanding and acceptance from others, and they learn that disclosure and similar behaviors evoke these healing experiences. By displaying understanding and acceptance behavior *to* others, they learn to facilitate healing experiences *in* others. In the argot of the TC, residents learn how to "reach out" for themselves and "give it away" to others.

A PROCESS PARADIGM: SOME PRINCIPLES AND MECHANISMS OF CHANGE

Thus far, the main elements of the TC treatment process have been outlined in terms of the interventions, behavioral dimensions, and essential perceptions and experiences. This section briefly outlines a paradigm to illuminate how these elements are linked or related in the change process, which incorporates behavioral and social learning principles with essential experiences and perceptions as mechanisms in the process.

The Learning Principles

Change in the TC is viewed from a behavioral orientation in terms of learning and training. Attitudes, feelings, roles, and awareness are regarded as valid behavioral data. For example, a resident's attitude on the job or in the morning meeting may evoke various responses in others. In conversations or groups, this attitude will be explicitly translated into observable behaviors (e.g., gestural, postural, or verbal) (De Leon 1991a). Thus, embedded in the community life of the TC are familiar behavioral training and social learning principles that underlie change in the four dimensions.

Efficacy Training. The general principle of trial and error learning is the basis for efficacy training in the TC. The resident must engage in the behavior that produces the mistakes as well as the correct positive outcomes. Indeed, errors highlight a subtle distinction between efficacy and self-efficacy that relates behavioral change with subjective outcomes. Efficacy is performing the behavior that works; *self-efficacy*, as a subjective outcome, is enhanced by *overcoming the errors* in performing the behavior that works.

Social Role Training. Although specific behaviors and attitudes are the primary observations, the focus of training is on *constellations* of related behaviors, skills, and attitudes that have labels indicating their social or psychological relevance. Thus, the resident jobs and positions in the work hierarchy, such as expediter, department head, and coordinator, are examples of roles learned in the TC. Socialization is a special type of role training that refers to classes of social behaviors and attitudes other than work roles. Typical labels for these behaviors are responsible, cooperative, and mature; role model behaviors are a broader class of

related behaviors and attitudes reflecting the values and expectations of the community.

Vicarious Learning. Individuals often initiate self-change through observation of and identification with others in the process of change. The sources of vicarious learning derive from the *context* of community life—its rules, norms, daily regime of activities, and informal interactions. For example, adherence to the explicit rules that prohibit drug use and all forms of antisocial behavior is mediated by peers and staff who act as role models for the appropriate behaviors and attitudes as normative expectations of the community.

Vicarious cues arise directly from the day-to-day social and interpersonal interaction with others. Hearing different life stories, witnessing subtle and dramatic examples of behavior change over time, and experiencing empathic exchanges with peers transmit covert but powerful emotional and perceptual signals toward change. Indirect vicarious cues come from information *about* others (e.g., the dispositions of dropouts, the successes of graduates, and the struggles of staff). All vicarious cues initiate some form of imitation, rehearsal, or trial and error attempts at change without explicit instruction.

Community as Trainer. Although behavioral and social learning principles are evident in the TC, these are "naturalistically mediated" as an inherent characteristic of community as method. An explicit instruction by the community *to* the community is that peers and staff are the observers, monitors, and mediators of the messages of recovery and right living.

Indeed, the role of community member is a trained and mutually monitored role. Residents are expected to be attentive to both the physical and social environment of the facility; to offer specific instruction, feedback, and support for individual efforts to change; and to express their concerns or affirmation concerning the status of the community itself. Staff as community members guide the residents to be role models and peer trainers, and they monitor the fidelity and impact of the daily activities as interventions for individuals and the community.

Perceptual and Experiential Mechanisms in the Process

In the TC perspective, changing the whole person involves not only observable behaviors but subjective perceptions and experiences. The

essential and critical perceptions and experiences can be viewed as *integral mechanisms* in the process that links interventions with behavioral change. For example, group acceptance of the individual is an intervention that induces a healing experience, which encourages the individual to engage in new behavioral efforts. Such efforts lead to consequential outcomes—both objective reinforcements (e.g., social approval, privileges, and change in community status) and subjective outcomes (e.g., personal efficacy and self-esteem). These changes result in internalized learning, perceptual contrasts, therapeutic events, and eventually changes in identity.

The subjective elements in the process may appear gradually in the daily regime of social interaction or as critical, striking occurrences. Nevertheless, either as consequences of interventions or correlates of behavioral change, the essential perceptions and experiences are necessary to stabilize new learning.

Stages of Change in the TC

Stages and phases are definable points in the developmental process. These can be described from different but interrelated perspectives of change, program, and treatment stages. For example, the four dimensions of change relate to the individual's movement according to specific goals or expectations of the program. However, another stage perspective, treatment *process*, more closely captures client change *in relation* to the treatment activities program. Thus, there are two perspectives of stages of change—program stages and treatment process stages. However, this chapter outlines only the program and treatment process stages.⁶

Program Stages

Three main program stages and several phases within each stage have been delineated for the traditional long-term TC. These stages are roughly correlated with time in program as follows: Stage 1, *induction*, corresponds to 1 to 60 days; Stage 2, *primary treatment*, 2 to 12 months; and Stage 3, *reentry*, 13 to 24 months. For TCs with shorter durations of treatments, the length of each stage is shorter, but the goals remain the same.

In Stage 1, *induction*, the main goals are assessment and orientation to the TC. Clinical assessment of the individual continues during the first 2 months of residency to clarify specific treatment needs and overall

suitability for the long-term residential TC. The objective of orientation is to assimilate the individual into the community through full participation and involvement in all of its activities. Rapid assimilation is crucial at this point when clients are most ambivalent about the long tenure of residency. Thus, the new resident is immediately involved in the daily regime, which emphasizes role induction into the community.

Stage 2, *primary treatment*, focuses on the main social and psychological goals of the TC. This stage generally consists of three phases that roughly correlate with time in program (2 to 4 months, 5 to 8 months, and 9 to 12 months). These phases are defined by the member's status in the community (junior, intermediate, or senior resident) and are marked by plateaus of stable behavior that signal the need for further change. The daily therapeutic and educative regimen (i.e., meetings, groups, job functions, and peer and staff counseling) remains the same throughout the year of primary treatment.

Stage 3, *reentry*, consists of two phases: early (13 to 18 months) and late (18 to 24 months) reentry. In the early phase, the main goal is preparation for healthy separation from the community. Clients continue to live in the facility but may be attending school or holding full-time jobs, either within or outside the TC. However, they are expected to participate in house activities when possible and to carry some community responsibilities.

In late reentry, the main goal is to complete the separation from TC residency. Clients are on "live-out" status, involved in full-time jobs or education and maintain their own households, usually with live-out peers. They may attend aftercare services such as Alcoholics Anonymous or Narcotics Anonymous or take part in family or individual therapy. This phase is viewed as the end of residency but not the end of program participation.

Stage Interventions. Throughout all the stages, the main social and psychological goals of the TC are pursued in the daily regime, which consists of the community and individual interventions previously described. However, the interventions differ in accordance with stage-specific goals in terms of their frequency, duration, and intensity, and the use of special groups, meetings, seminars, and professional services. For example, the specific goals of assimilation and affiliation in the early stage require less emphasis on therapeutic demands for change and more emphasis on training and instruction in the TC perspective, approach, and

procedures. Similarly, the specific goals of the reentry stage emphasize acquisition of the skills and information needed for facilitating separation from the program and transition to independent living. Thus, emphasis is on individual planning and activities concerning educational and vocational needs, interpersonal and family relationships, and social and sexual behavior.

Stage Profiles. Although individual differences are the rule in terms of rate of change, typical resident profiles can be described for the various stages and phases of the program. These profiles reflect both the overall and stage-specific goals of the program in terms of the four dimensions of change described earlier (i.e., community member, socialization, developmental, and psychological). These profile descriptions are illustrated in other writings (De Leon 1994*a*, 1994*b*; De Leon and Rosenthal 1989).

Treatment Stages of Internalization

Progress refers to the movement of the client along dimensions of behavioral and attitudinal changes with respect to the goals of the program stages. The treatment process refers to the interaction between client progress and the myriad of community and individual interventions. Thus, interaction can be viewed as an evolving relationship between the individual and the community that can be described as *internalization* that is evident in the stability, acceptance, and use of the behaviors, attitudes, values, and general teachings of the TC.

For TCs, the importance of internalization is especially salient because the power of its community method can readily modify observable behaviors and attitudes in the program setting. However, these changes may not endure once the individual separates from the omnipresent influence of the peer community. Practically all residents in TCs display drug-free behavior during their residential stay; that relapse occurs among a number of the dropouts and some of the graduates, however, underscores the relevance of internalization in the change process.

The mark of internalization is the *transfer* of the influences of new learning from external (objective) consequences to internal (subjective) outcome experiences of the individual. Internalized learning can be characterized as more consistent and more self-initiated ("inner directed") than externally influenced learning. Notably, learning that is internalized

is generalizable to new situations both inside and outside of the program (De Leon, in press). In the TC, internalization does not occur all at once—it evolves over time. This evolution can be characterized in terms of four stages—*compliance*, *conformity*, *commitment*, and *integration*.

Compliance. In this stage, there is little evidence of internalization. The resident adheres to the norms, expectations, and teachings of the community primarily to avoid negative consequences such as disciplinary sanctions or undesirable alternatives such as discharge to the street, return to jail, homelessness, or an unwanted home situation.

Conformity. In this stage, the resident adheres to the program teachings primarily to maintain affiliation with the community, either to avoid threats to newly formed relationships or simply to enhance their acceptance by peers and staff. This stage reflects a high degree of program affiliation but a relatively low degree of internalization.

Commitment. In this stage, residents adhere to their own *personal resolve* to remain in the treatment process and complete the treatment program. Early phase commitment still reflects a considerable degree of conformity; the individual's resolve is largely influenced by the program, its goals of completion, graduation, and remaining on parity with peers. This phase is much like the commitment of college seniors to finish school with their class, graduate, and receive a degree. However, early stage commitment also reflects some degree of internalization, since the social value and psychological importance of completion are major teachings of the TC. This teaching is incrementally strengthened by the individual's experience in attaining the phase and stage goals leading to program graduation. Thus, residents who commit themselves to completing the program have internalized a valued program teaching.

In the *commitment to self* phase, the individual adheres to a personal resolve to remain in the change process beyond completion of the program. In this stage, the resident reveals a greater degree of internalization, since he or she has fully accepted the teaching that recovery and personal growth are continuing processes.

Integration. This is an evolving stage that begins in treatment but emerges mainly after separation from the program. The term "integration" underscores the interrelation between TC influences and broader life experiences. The values of right living and the recovery teachings of the program serve as general guidelines and tools for life

adjustment. The coping strategies, understanding, and insights of the previous stages are validated through *confirmatory experiences* and *generalized* to new life situations. Thus, the internalization of TC teachings is significant and stable. However, individuals gain perspective on the benefits, limits, and uses of these teachings in their personal growth or self-actualization.

In this stage, consolidating and advancing personal gains are primary goals, rather than recovery from chemical dependency. Sobriety (i.e., abstinence in behavior, thinking, and values) is *internalized*. The individual does not consciously think about maintaining abstinence, but he or she accepts this as a *prerequisite* for right living. The focus is on personal growth and psychological and existential issues for which the individual may utilize therapy or assistance. Their affiliation shifts from the program community to the wider social community of family, friends, work, and professional colleagues, and involvements are with mainstream activities and obligations (e.g., work, education, religion, and social and family roles).

Identity Change. A distinctive marker of the integration stage is a change in identity that is perceived by self and others. No single label describes how substance abusers view themselves; however, some of the more frequently stated labels that change during and following treatment are addict to nonaddict, social deviate to conventional person, baby to grown up, and antisocial to prosocial citizen. These labels reflect the general changes in lifestyle as well as the specific behaviors of deviance and substance use. The shift in identity is gradual since the elements of identity change are evident throughout all of the stages. However, it is the powerful mechanism of *perceptual contrast* that marks the main change in the integrative stage. Individuals retrospectively reframe and relabel who they were then and who they are now.

SOME CONSIDERATIONS FOR RESEARCH

The theoretical formulation outlined in this chapter suggests a broad agenda for research in TCs. The major lines of inquiry are the validity and utility of the framework itself and the extent to which it is applicable to the current diversity of TC-oriented programs. This agenda is further addressed elsewhere in this monograph. In the final section of this chapter, some implications for theory, research, and policy in TCs are briefly considered.

Program Models

The extent to which the current diversity of TC-oriented programs is guided by the perspective and foster community as method is fundamentally an empirical issue that remains to be evaluated. In this regard, an initial effort is underway using a modalitywide survey to describe the range of TC-oriented programs based on many of the essential elements outlined here (Melnick and De Leon 1993). This research effort is described briefly in other chapters of this monograph.

Process Framework

Research on treatment process in the TC presents a formidable challenge for investigators. The framework presented underscores the need for operational definitions of the elements as well as appropriate measures, particularly of the perceptual and experiential concepts. Feasible methods of data collection are needed, as are analytical models for capturing the effects of interventions in dynamic interaction with a changing client.

A recent advance in the measurement of essential perceptions has been the development of a multidimensional instrument assessing circumstances, motivation, readiness, and suitability (CMRS) for TC treatment. The CMRS reliably predicts short-term retention in TC treatment (De Leon and Jainchill 1986; De Leon et al. 1993, 1994; Schoket 1992), and it holds promise for differentiating subgroups of substance abusers with respect to their motivation and readiness for drug treatment in general.

Treatment Stages and Planned Duration of Treatment. The process stage formulation underscores the relationship between time in treatment and treatment process. Retention is the most stable predictor of positive treatment outcomes in TCs (Anglin and Hser 1991; De Leon 1985; Hubbard et al. 1989; Institute of Medicine 1990; Tims and Ludford 1984; Simpson and Sells 1982). Clinicians always have known that the treatment effects in the TC were *time correlated events*. In the present theoretical framework, these events reflect the stages of internalization. If a significant degree of internalization of the TC teachings is not attained, recovery is incomplete and the potential is greater for premature dropout, relapse, or recidivism after leaving treatment.

These treatment process considerations bear upon several intersecting issues—the differences among subgroups of substance abusers, the treatment setting (residential/nonresidential), and the planned duration of treatment (short, medium, or long). Research on these issues will have important implications for policy and treatment planning as well as science.

For example, clinical and research evidence has shown that the 18- to 24-month duration of treatment in long-term residential TCs has been the optimal time period to achieve some level of internalized change. However, increasing numbers of substance abusers who are homeless, violent, psychologically disturbed, and unhabilitated underscore the requirement for even *longer* periods of immersion in the TC recovery process, given the extensive habilitative and rehabilitative needs of these groups.

Even among the more socialized substance abuser, there is a need for a sufficient period of treatment involvement to ensure some degree of internalized change, regardless of treatment setting. Thus, the effectiveness of shorter term TC-oriented residential, day treatment, and outpatient programs will depend on appropriate matching of clients to these different settings from a *treatment and recovery stage perspective*. Research is needed to develop and evaluate the efficacy of assessment protocols that guide such matching strategies.

Process and Design. In the TC, the change process unfolds as a dynamic interaction between the community and the individual. In this process, a self-selection activity is ongoing as individuals continually make decisions about remaining in treatment based on their behavioral and subjective changes. Thus, from a self-help recovery perspective, self-selection *is not a problem, but a prerequisite* for the effectiveness of treatment. Treatment works *because* of client factors such as motivation, readiness, and perceived suitability of the treatment.

This view of client self-selection contains important implications for research designs in TCs, some of which have been discussed in other writings (De Leon 1993). New design paradigms are needed that accept a functional view of self-selection; namely, that treatment effectiveness *depends* upon the client's contribution to the process and outcomes. Controlling for self-selection and isolating the specific effects of treatment are less relevant than identifying the relative contribution of these factors to the change process.

Treatment Process and Recovery. The present formulation stressed the distinction between the process of treatment in the TC and the more general process of recovery. The former refers to client change in relation to the interventions, services, and activities of the TC. Recovery is a broader term, referring to a continuing process of individual change from active use or addiction to maintained sobriety. Many factors contribute to the recovery process in addition to treatment. These relate to the client (e.g., social and psychological resources); life circumstances (e.g., social-economic potency, personal relationships, friendships, and family); and specific events (e.g., health, personal, and material losses or gains).

Treatment in the TC can be viewed as one significant facilitator of the recovery process. Clients who achieve the social and psychological goals of the TC are viewed as better prepared to positively engage life and to continue in their recovery. In this sense, completion or graduation from the TC represents the end of treatment, but it is also a stage in the recovery process.

This distinction between treatment and recovery has important implications for research, particularly with respect to evaluation of the effectiveness of the TC. For example, shorter term success rates in the period proximal to separation from treatment are more directly correlated with the specific impact of the TC program. Longer term success rates, however, are subject to a variety of influences that may obscure the specific contribution of TC treatment. Of special relevance to these long-term outcomes, however, is the client's recovery stage, particularly the posttreatment integration stage described earlier. As noted in this stage, the individual incorporates their treatment-based learning into their general life experiences. From this stage perspective, fair and appropriate evaluation of the effectiveness of TC treatment must assess both its *indirect* and *direct* contributions to sustaining the individual's long-term recovery status.

CONCLUSION

Several caveats must be emphasized with respect to the present theoretical formulation of the TC. First, it reflects the perspective of the author and does not necessarily represent a position of consensus among workers in TCs. Second, as noted, the essential elements are most characteristic of the traditional long-term residential TCs; their relevance

for other TC-oriented programs (short-term residential and nonresidential) remains to be empirically clarified. Third, a theoretical formulation of the TC has obvious implications for training, clinical practice, quality control, and funding. However, consistent with the theme of the present monograph, this discussion has highlighted the research considerations.

NOTES

1. The terms "components" and "elements" are used differently; the former refers to the program model, while the latter refers to the significant features of the general theoretical framework.
2. As discussed elsewhere, the TC community has features that are common to other communities, such as schools, the prison, the military, and even some corporations. Although closer in form to extended families, villages, and some utopian communities, the TC remains unique in how it uses the community as a method to change, treat, or assist the individual (De Leon, in press).
3. A useful formulation of TC activities in terms of structure and setting is provided by Frankel (1989).
4. Although perceptions and experiences remain to be operationally defined, they are characterized elsewhere (De Leon, in press). In the present framework, perception refers to how residents understand or give meaning to what they see or hear. Experience refers to more complex subjective events that include feelings and perceptions as well as behavioral change. In the last analysis, however, subjective events such as perceptions and experiences are indicated behaviorally with certain words, deeds, and gestures.
5. Detailed descriptions of the program and process stages in the TC are contained elsewhere (De Leon, in press). A more fully elaborated recovery stage perspective drawn from the clinical and research experience with TC residents is described in De Leon (1994b).
6. The late reentry phase has been viewed by TCs as an aftercare stage, although these agencies have been under funded for providing the aftercare services of a fully developed continuance program.

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Socialization Into the Therapeutic Community Culture

Lorand Szalay

INTRODUCTION

This chapter describes a new analytic approach to process evaluation in the treatment of drug addiction. This approach focuses on the assessment of changes in the client's self-image, relationship to the social environment, perceptions of harmful substances, and on other variables found to be significantly related to habitual drug use. The following topics are covered: (1) a description of the Associative Group Analysis (AGA) method; (2) findings obtained in a cross-sectional comparison of 200 pretreatment and 200 posttreatment clients at an urban therapeutic community (TC) showing changes in dominant trends of perceptions, attitudes, and cognitive organization; (3) differences in the perceptions and evaluations of harmful substances by other groups of users and nonusers; and (4) a discussion of a multidimensional strategy of process evaluation in TC settings as a means of obtaining useful feedback on the psychological effects of programs aimed at resocialization.

Approach

The investigations of pretreatment and posttreatment clients in a TC setting focus on changes in psychological variables related to program success. Analogous efforts to assess program effects have capitalized on such personality traits as locus of control or alienation. Since the classic efforts have remained surprisingly ineffective, the present approach goes in distinctly different directions. It centers on perceptual and attitudinal dispositions and on changes in cognitive organization in systems of mental representation.

Students of human behavior working on theories of cognitive representation assume that much of goal-oriented human behavior is guided by cognitive maps or "systems of mental representation." Triandis (1972) wrote of a system of cognitions that constitutes a map of the ways people conceive their environment. Tolman (1948) described the maps as guidance or control systems that exert continuous influences on choices and behavior. Mental representations include such diverse

notions as cognitive map (Tolman 1948), cognitive representation (Downs and Stea 1973), internal representation (Posner and Keele 1968; Shepard and Chipman 1970), subjective lexicon (Miller 1967), meaning system (Osgood et al. 1957), and thought world (Whorf 1957). These notions converge in the fundamental assumption that people's behavior is organized and guided by their subjective meanings and by the system of subjective views they develop in the representation of their subjective world.

Following psychological tradition, the main thrust of empirical research that is designed to reconstruct systems of subjective representations is centered on the assessment of subjective images and meanings. Compared to lexical meanings based on linguistic use or convention, psychological meanings are subjective reactions (Osgood et al. 1957) that frequently encompass affects, personal experiences, and perspectives. These constitute elementary units or mosaic pieces of the global system of mental representation or world view. The system of subjective representation is not merely an aggregate of subjective images and meanings but a highly organized, coherent system. These representational units are highly interdependent; each unit has to fit and be adapted by the system. The AGA was used to assess subjective images and meanings as representational units and to reconstruct the main parameters of systems of mental representation.

The research was organized to test three main assumptions based on a representational model of behavioral organization as follows.

1. By assessing subjective images and meanings, it is possible to reconstruct perceptual and attitudinal dispositions differentiating pretreatment drug addicts and rehabilitated clients.
2. The differences between active addicts and rehabilitated addicts are not limited to single isolated images or meanings but reflect trends across several themes (e.g., me, I am, friends) used in the representation of broader domains (e.g., self/friends).
3. The systems of subjective representation can be charted in three dimensions: perceptions, dominant priorities, and attitudes or evaluations. The systems of addicts and rehabilitated clients can serve as reference groups for determining the status of individual clients and how much they have progressed in thinking like successfully rehabilitated addicts.

METHOD

Subjects

The research was organized to test the potential of AGA to map the systems of mental representation of pretreatment and posttreatment samples and to measure changes in clients' perceptions and attitudes related to drug use. The research relied on a cross-sectional comparison of pretreatment and posttreatment clients at an urban-based TC. The TC is a long-term, residential treatment facility that emphasizes resocialization and promotes behavioral changes that will reintegrate the individual into society.

The pretreatment group consisted of 200 habitual drug users who were at the beginning of their treatment at the TC. All members of this group were hardcore users, predominantly of cocaine and crack. All suffered from serious behavioral difficulties such as the inability to hold jobs or earn a living, to function in normal family roles, or to meet personal obligations. Most of the addicts entered treatment after reaching a level of dependency that forced them to seek treatment. This group was 77 percent male and 23 percent female; the ethnic makeup of the sample was 53 percent white, 36 percent black, and 10 percent Hispanic. Fifty-four percent of the clients had been in drug treatment before.

The posttreatment group included 200 residents at the same TC who had successfully reached a drug-free status and were in the final stages of their rehabilitation program. These clients had spent an average of 1 year and 8 months under strict regulation and control at this TC. They were judged to be successful in their treatment by the following criteria: maintaining a drug-free status over many months; assuming increasingly demanding jobs and responsibilities within the TC and later in normal job settings; and developing plans, holding to schedules, and developing personal ties. This group was 74 percent male and 26 percent female; the ethnic makeup of the sample was 48 percent white, 42 percent black, 9 percent Hispanic, and 1 percent Native American. In the posttreatment group, 47 percent of the clients had previously been in drug treatment.

Drug users and nonusers in groups of similar size ($n = 200$) outside treatment organizations also were included in some of the following comparisons. These groups came from college populations tested across the United States in the context of Department of Education interest in the evaluation of prevention programs. Since these groups differed from the

client populations in average age and education, they were not used to reach generalizations on treatment versus nontreatment. They served mainly to illustrate differences in the psychological dispositions associated with drug use and to test the effects of drug treatment on the relationship of these groups.

The AGA method was administered to the above samples by using stimulus themes covering several domains of life such as self-concept, drug abuse, interpersonal and social relations, work, and future. The standard AGA data collection procedures were used to elicit multiple response, free associations to the selected themes.

The AGA

The use of word associations in the empirical study of word meanings has its roots in the work of Noble (1952) and Deese (1965). As described in *Subjective Meaning and Culture* (Szalay and Deese 1978), the AGA method uses continued free association tasks to reconstruct the subjective images and meanings of selected samples of respondents. The AGA is a highly unstructured and open-ended analytical method which offers access to behavioral dispositions beyond the reach of more direct and more structured methods of assessment. It does not call for an overt expression of personal position or opinions as no specific questions are asked. The respondents perceive word associations as a language task rather than an attempt to probe their personal beliefs or attitudes.

Data Collection, Test Administration. In its most common form, the AGA uses association tasks administered in written form to selected samples in group sessions. They receive the word themes (e.g., *ME*) printed several times on slips of paper and are asked to write as many ideas as possible related to each theme presented in 1 minute. On the average, participants give six to eight different associations to each of the words presented on each slip. As experiments have shown, the first response to each theme is slightly more informative on the subjective meaning than the next. These differences have been measured experimentally by retesting the stability of responses at various rank places and used to assign weight to the responses. The weights obtained are as follows: 6, 5, 4, 3, 3, 3, 3, 2, 2, 1, 1, 1. The weighted responses of the members of a particular sample group (e.g., pretreatment addicts) were tallied into response distributions as shown in table 1.

TABLE 1. *Highest scoring associations to ME*

Pretreatment		Posttreatment	
Response	Score	Response	Score
Love	93	Love	69
Lonely,ness	55	Care,ing, for	66
Good,ness	46	Happy,ness	62
Bad	43	Good,ness	49
Confuse,d,ing,ion	43	Myself	46
Hate,red	41	I	44
Myself	37	Kind,ness	36
Drug,s	35	You	31
Care, ing, for	31	Friend,s	29
Addict,s	28	Loving	23
Help,ing,ed	25	Like	21
Hurt,ing	25	Afraid	20
Therapeutic comm.	22	Lonely,ness	18
Alone	21	Person	18
Selfish,ness	21	Scare,d,y	18
Understand,ing,able	19	Self	16
Nice	19	Father,hood,ly	16
Junkie	16	Responsible,ty	15
You	16	Alone	14
Future,istic	16	Straight	14

Mosaic Pieces of Perceptions and Evaluations. Table 1 presents some of the most frequent responses elicited by the stimulus word *ME* from two samples. Based on the distribution of hundreds of spontaneous responses, such response lists offer many mosaic pieces of the respondents' subjective perceptions and evaluations. Each response has a score value. These values reveal how salient a particular idea or attribute is (*loneliness, happiness*) as a mosaic of the group's self-image. A perfunctory comparison of the responses suggests some characteristic differences in the way pretreatment and posttreatment clients and nonusers view themselves. For instance, the pretreatment clients show a stronger sense of loneliness, and the posttreatment clients convey a relatively happier view of the self.

Related responses form natural clusters and reveal mosaic pieces of the group's subjective meaning. Since the response distributions are extensive, several analytic procedures have been developed to arrive at more global and systematic conclusions. A simple method involves content analysis; analysts trained in this process group the responses into

relevant main clusters or categories. For instance, responses conveying insecurity and negative affects are placed in one cluster and labeled by the most salient reactions: *lonely, confused*. All the references to positive affects are placed in another cluster, and labeled again by the highest scoring reactions: *love, friendship*.

As past studies (Szalay and Deese 1978) have shown, such categorizations of content analysis can be performed with a reasonable degree of reliability. The mean correlation between analysts working independently was 0.7. An application of this procedure to the two samples' responses to *ME* resulted in the main response clusters shown in table 2. The pretreatment group shows generally low self-esteem and strong negative self-evaluations: *loneliness, confused, hatred, and hurting*. As the references to drugs show, drug use is part of this group's self-image; they also identify themselves spontaneously as *addicts* and *junkies*. Both treatment groups show a strong preoccupation with *love* and *caring*, which corresponds to their affect-laden focus in other domains such as family. Expressions of positive moods or evaluations from the pretreatment group are few; the posttreatment clients are considerably more positive with reactions such as *happiness, friends, loving, and responsible*. Both the treatment samples, however, show strong signs of internal anxieties and distress such as *hurt, afraid, scared, and lonely*. These results offer many insights that are inaccessible through direct questions, such as the intensity of ambivalent feelings and the internal identification with a problem (e.g., drug use).

To convey the results of this analysis in a simple visual form, "semantographs" are used (see figure 1). The semantograph is a graphic presentation showing the differential salience of the main perceptual and evaluative components of the groups' subjective image. The bars of the graph represent the main components of the groups' self-image. On this graph, the outlined bars show the relative salience of the perceptions and attitudes of the pretreatment drug abuser group; the shaded bars show the salience of these same perceptual and attitudinal components for the posttreatment drug-free group. This technique of visual presentation is used as a quick comparison of the identification of main similarities and differences. On select clusters where the differences appear sizable, the actual reactions of the groups are listed in detail. Several analytic measures have been applied to gauge cognitive organization along such main dimensions as perceptions, priorities, and evaluations.

Subjective Perceptions, Representations. The similarity of subjective views and perceptions of a particular theme for different groups is measured by comparing the distributions of their free associations using Pearson's measure of product-moment correlation. For groups, the reliability of this measure based on split-half comparison over 40 themes was 0.82 (Szalay and Bryson 1973). Perceptual

TABLE 2. *Main components of perception and evaluation of ME by pretreatment and posttreatment samples*

	Percentage of Total Score	
Main Components	PRE	POST
Lonely, confused, hate	35	12
Love, friendship	16	20
Good, kind, loving	14	14
Drugs	10	3
Happy, healthy, strong	2	15
I, myself	5	13
Family, others	4	9
Studious, intelligent	4	3
Appearance, sex	3	1
Individual, person	2	3
Future, working	3	5
Miscellaneous	2	3
Total Scores	969	970

similarity scores also can be computed for each individual with reference to the distributions of free associations characteristic of the groups being compared. For each stimulus word, responses that differentiated the groups (e.g., drug users and nonusers) are identified. Each such response is scored +1 if it is more characteristic of one group (e.g., nonusers) or -1 if it is more characteristic of the other group (e.g., drug users). In this manner, individual perceptual similarity scores are calculated for all respondents. Discriminant function analysis of this variable correctly identified 88 percent of the respondents ($n = 400$) in one study as frequent drug users or nonusers (canonical correlation (can. corr.) = .78, chi-square = 376.7, $p < .000$).

Subjective Priorities, Importance. In a person's subjective representation of the world, some subjects, issues, and ideas play more important roles than others. Drugs may be dominant in the lives of drug users but not of nonusers. The importance or dominance of a particular stimulus theme to a particular person or group is inferred from the number of responses offered in the association task. The dominance scores calculated both on an individual and group basis are analogous to Noble's (1952) widely tested measure of "meaningfulness." These scores have been used to measure differences between groups in their subjective priorities, as well as to trace changes in priorities over time. The reliability of the group dominance score ($r = 0.93$) was measured by test-

ME

PERCEPTIONS AND EVALUATIONS

BY

Pre-Treatment
Total Score: 969

Post-Treatment
Total Score: 970

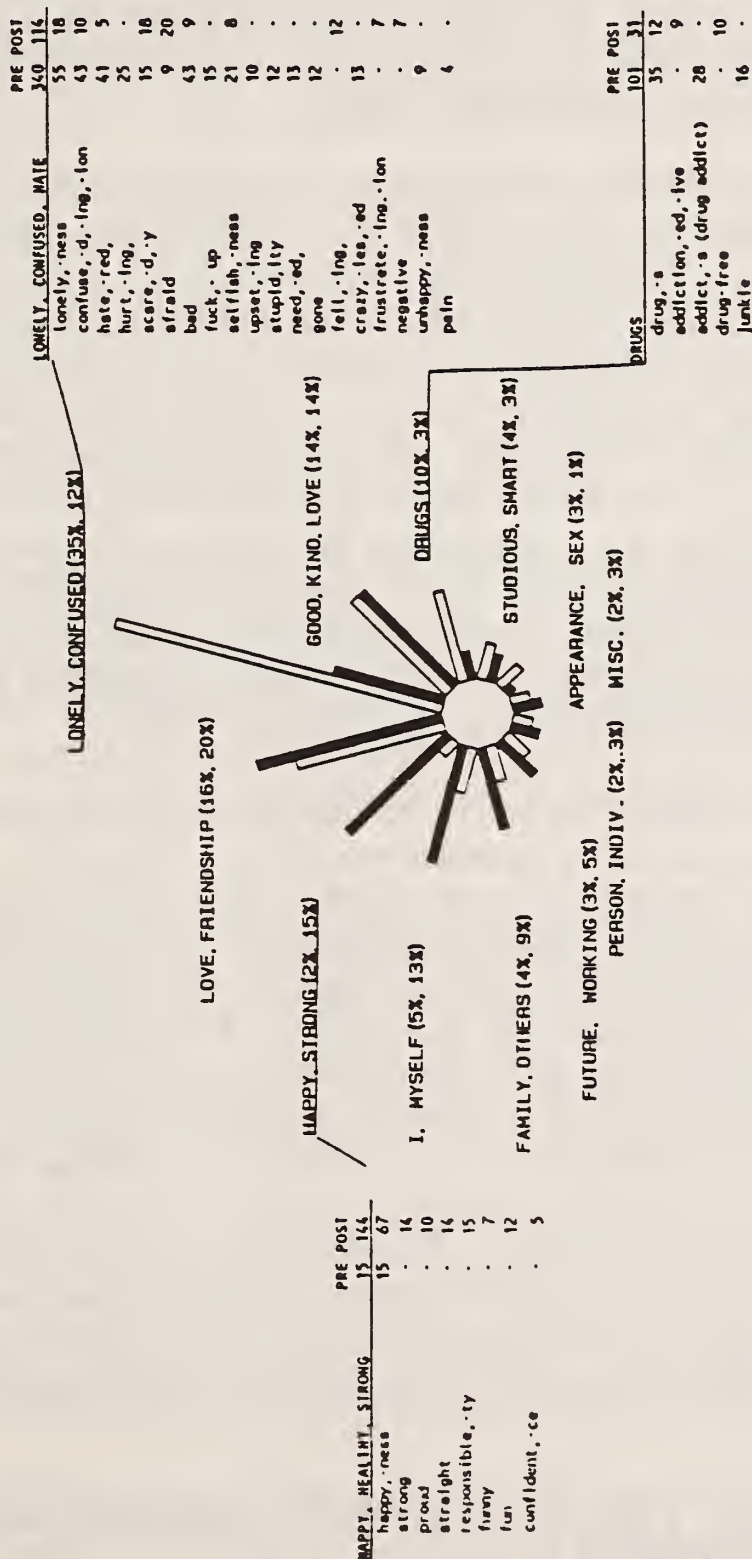


FIGURE 1. Perceptions and evaluations of ME

retest comparison (Szalay and Bryson 1973). Individual dominance scores are computed as the number of responses given to each stimulus theme. Discriminant function analysis of this measure correctly identified 64 percent of the respondents in one study as frequent users or nonusers (can. corr. = .33, chi-square = 45.7, $p < .005$). A dominance similarity score, calculated on the basis of discriminant function coefficients for the individual dominance scores, shows whether a person belongs more to one group or another (e.g., a user or nonuser group or a pretreatment or posttreatment group).

Subjective Affects, Evaluations. Perception of the environment is loaded with positive and negative evaluations and affects. Certain elements are seen as desirable and attractive and others as aversive and harmful. Evaluations and affect-loading are terms that are closely synonymous with attitudes, the most widely researched subject area of psychology. As extensive research has demonstrated, affects—positive versus negative evaluations—are important psychological variables. One of the ways to reconstruct how a person or group evaluates a particular stimulus theme is to calculate the predominance of positive versus negative responses to it. The Evaluative Dominance Indices, calculated on the basis of positive versus negative reactions, produce very high positive correlations of 0.88 to 0.91 with independent attitude measures (e.g., semantic differential) (Szalay et al. 1970).

Evaluative scores also can be calculated on an individual basis. The list of responses to all the stimulus words are reviewed by two judges. The two judges rate each response word in terms of its positive or negative affect (interjudge correlation coefficient = 0.95, $p < .001$). The ratings of the two judges are averaged and subsequently used to infer the evaluation of each stimulus theme by each subject. For each subject, the evaluation of each stimulus theme is computed by averaging the judges' evaluation of the response words. Discriminant function analysis of this measure has correctly identified 69 percent of the respondents in one study as frequent drug users or nonusers (can. corr. = .46, chi-square = 90.9, $p < .000$). An evaluative similarity score, calculated on the basis of discriminant function coefficients for the individual evaluative scores, shows whether a person belongs more to one group or another (e.g., to a user or nonuser group or to a pretreatment or posttreatment group).

RESULTS: PROGRAM EFFECTS, IDENTIFICATION OF THE REHABILITATED

The following results show differences/changes in perceptions or subjective representations of pretreatment and posttreatment clients measured in selected domains of life and in their overall systems of representation.

Program Effects Measured in Selected Domains of Life

Results are presented on perceptions and attitudes in the domains of *SELF/FRIENDS* and *PROBLEMS*.

Self/Friends. The following general observations are based on the analysis of the themes *I AM* and *FRIENDS* shown in figures 2 and 3. Perceptions in this domain provide a measure of the self-esteem and confidence of the treatment groups. The pretreatment group reveals a very low level of satisfaction with themselves, while the posttreatment group expresses much more confidence and self-worth. These self-perceptions are reflected in their opinion of friends and friendship. The pretreatment clients have a deeper sense of loneliness than the posttreatment clients. They mention the absence of friends in their lives. They are preoccupied with negative aspects of both themselves and their friends, such as *hurting*, *hate*, and *badness*. They also link themselves and their friends more to drugs and addiction. They have low self-esteem, and they have very mixed feelings about friends.



The posttreatment clients have more faith and confidence in themselves and in friends. They are happier with themselves and with their friends. They see themselves and their friends as more caring and loving, honest, and trustworthy. They have been helped by their friends and see them as supportive. The friendships experienced in the TC seem to have had a very positive effect on the clients' self-esteem and on their ability to trust and rely on others.

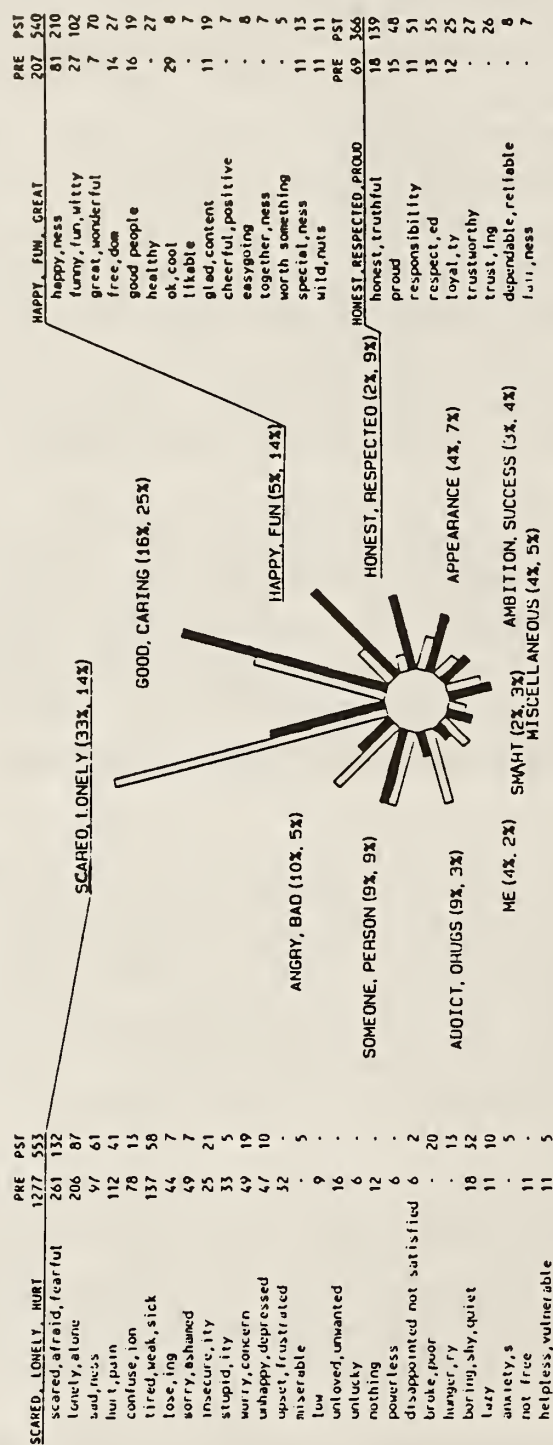
Problems. Similarly consistent trends emerged across themes used in the representation of this domain. Two are presented here: *PROBLEMS* (figure 4) and *WORRIES* (figure 5). The two groups again show differences in self-esteem. The pretreatment group has much lower self-image and is focused on internal personal problems; the posttreatment group has more self-confidence and is more externally oriented.

In the context of *PROBLEMS*, *WORRIES*, and *LONELINESS*, the pretreatment clients refer to themselves more frequently than the posttreatment clients, revealing that they have a more negative self-image and are more conscious of having emotional problems. They also tend to view personal and familial relationships as a predominant problem.

The posttreatment clients are more outwardly oriented. They show more apprehension about money and success. Anticipating their departure from the TC, they are concerned with work, jobs, and school. It seems that these clients have come to better terms with themselves and have greater confidence in their ability to find solutions to problems as they move back into the world. After treatment they also show more

PERCEPTIONS AND EVALUATIONS

 Pre-Treatment  Post-Treatment
 Total Score: 3866 Total Score: 3972



PRE-TREATMENT: These clients display a decidedly more negative self image, describing themselves as scared, lonely, hurt, confused, and unhappy. They also see themselves in terms of their drug problem as addicts and junkies.

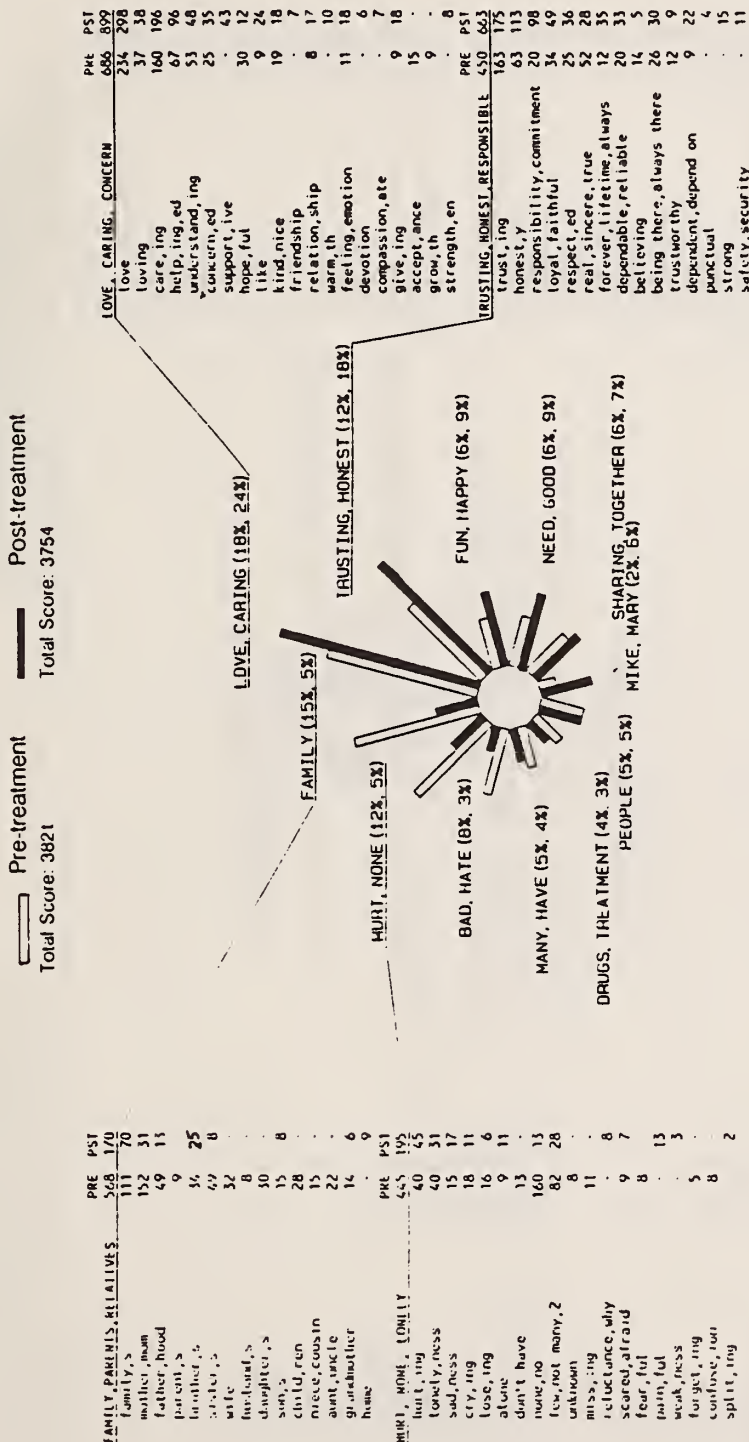
POST-TREATMENT: The clients alter treatment display more confidence, viewing themselves as responsible, trustworthy, and successful. They also have a more positive attitude about their personal lives, thinking of fun and happiness as well as love and kindness.

FIGURE 2. *Perceptions and evaluations of I AM*

FRIENDS

PERCEPTIONS AND EVALUATIONS

BY



PRE-TREATMENT For this group, friends represent a love-hate relationship. The image of friends stirs memories of trouble and emotional problems -- fighting, hate, etc. Pre treatment clients are inclined to say they have no friends. They focus on family members (especially mother), which could be due to their lack of friends outside the family.

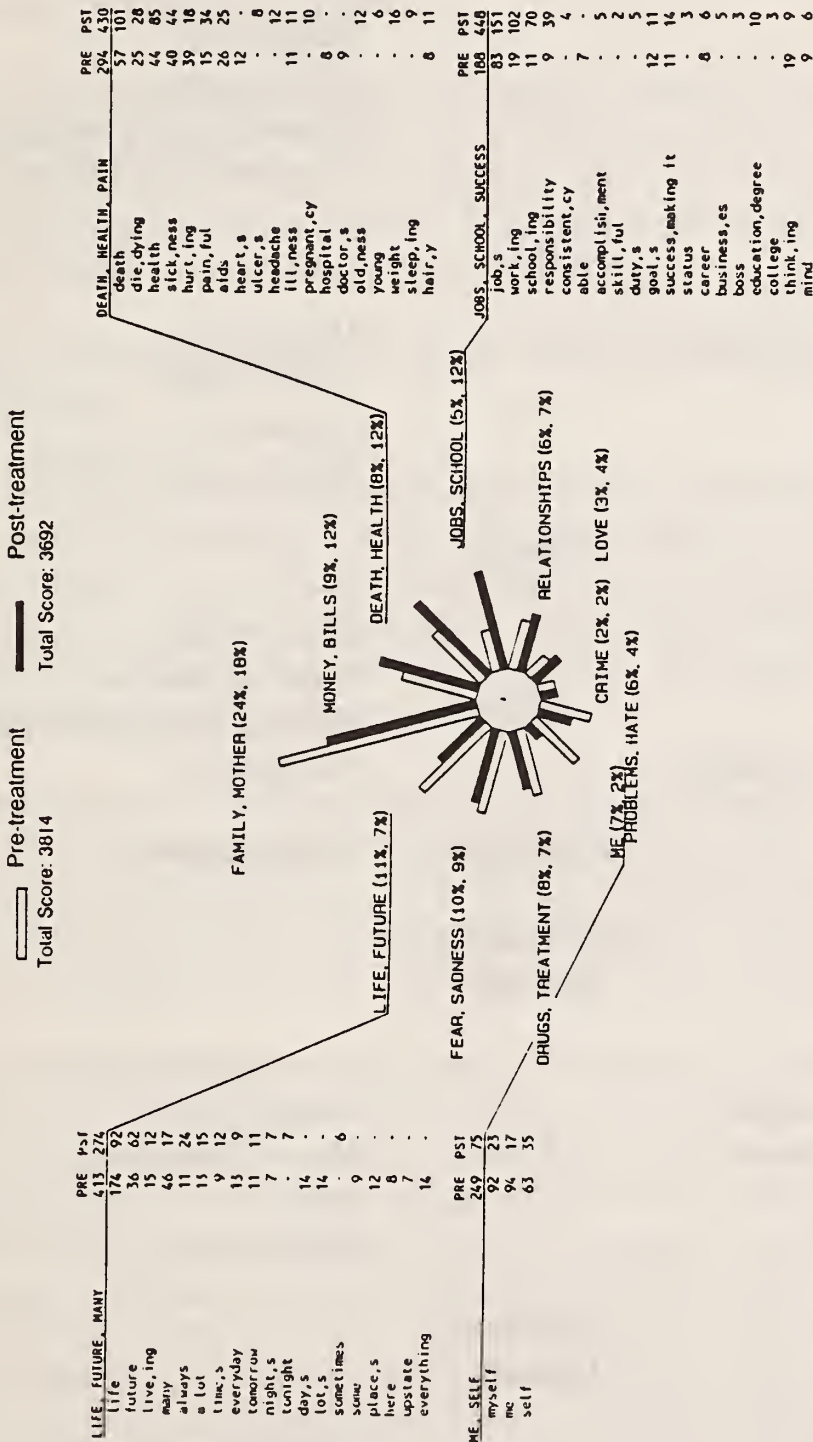
POST-TREATMENT: This group places much greater emphasis on positive aspects of friendship -- love, loyalty, support, fun. These clients expect friends to be honest, trustworthy, responsible and dependable. They also mention names of specific friends more often.

FIGURE 3. Perceptions and evaluations of FRIENDS

WORRIES

PERCEPTIONS AND EVALUATIONS

BY



PRE-TREATMENT: These clients' worries center around themselves and to some extent their families. They emphasize the predominance of worries in their lives by referring to "many," "every day," and life in general.

POST-TREATMENT: These clients worry about life after treatment: getting money, work, jobs, going to school. They are also very concerned about health and sickness; compared to the pre-treatment group, they are much more worried about death and dying.

FIGURE 5. Perceptions and evaluations of WORRIES

FIGURE 6. *Dominant trends of perceptions and evaluations differentiating pretreatment and posttreatment clients*

Pretreatment Trends	THEMES	Posttreatment Trends
	I am	
Scared, lonely Angry, bad Hurt, confused Addict, drugs	↔	Happy, fun Good, caring Honest, loyal, trustworthy Responsible, respected, proud
	Me	
Lonely, confused, hurt Hate, anger I, myself Drugs	↔	Happy, fun Good, caring Appearance Honest, loyal, reliable
	Friends	
None, don't have Family Bad, hate Fighting, trouble, stealing	↔	Love, caring Trusting, honest Need, good, specific names Fun, happy
Pretreatment	DOMAINS	Posttreatment
	Self/Friends Domain	
Hate, anger, bad Hurt, confused, scared Lonely, lack of friends Addict, drugs	↔	Good, love, caring Happy, fun Honest, trustworthy, loyal Appearance
	Problems Domain	
Drugs Many, always, life Self, me Family, mother, children	↔	Work, job, school Solve, overcome Love, trust Death, health

sensitivity to pain and hurt, health, and illness, particularly the idea of death.

The results obtained in these domains have shown several characteristic differences between pretreatment addicts and rehabilitated clients who have reached a stable drug-free status. Figure 6 illustrates trends or perceptions and evaluations that set the rehabilitated posttreatment group apart from the pretreatment addicts.

In general, the results show changes in clients' subjective views and in their systems of mental representation in important domains related to drug abuse. At the same time, the findings offer a host of partially contrasting perceptual and evaluative dimensions to trace client progress in domains related to drug use and program success.

Perceptual and Attitudinal Trends Differentiating Drug Users and Nonusers

The comparison of pretreatment and posttreatment client samples revealed marked differences in their views and attitudes, which are explicable largely by the effects of the treatment process and by the influences of the treatment environment. The nature and consistency of these differences lead to the question: Can such differences be identified between drug users and nonusers as well?

Extensive comparative studies conducted with elementary to college-level students across the country allow the author to answer this question conclusively and affirmatively. To illustrate such differences, the next section compares user and nonuser college students on their image of *MARIJUANA* (figure 7) and on their image of *DRUGS* (figure 8).

Again, studies found highly consistent trends across several themes (*MARIJUANA*, *DRUGS*, *GETTING HIGH*, and *ALCOHOL*), showing that the users consistently pay more attention to the fun and entertainment value and the high and euphoric effects of these substances. They show more awareness of altered states of mind. The users are more familiar with types and brands of drugs and alcohol, and they tend to make more references to hard drugs and hard liquors. They do not pay such close attention to the harm or health hazards of addiction; in general, they have much more positive attitudes toward drugs, alcohol, and addiction. In addition, there is a stronger association between the use of harmful substances and sex. The nonusers, on the other hand, show more awareness about and concern with the lawfulness and addictive nature of drugs. They emphasize danger, death, and killing, and they show more negative attitudes and categorical rejection. The nonusers focus on drugs and alcohol in general terms rather than on specific types or varieties; they are less familiar with slang terms. They also have a stronger

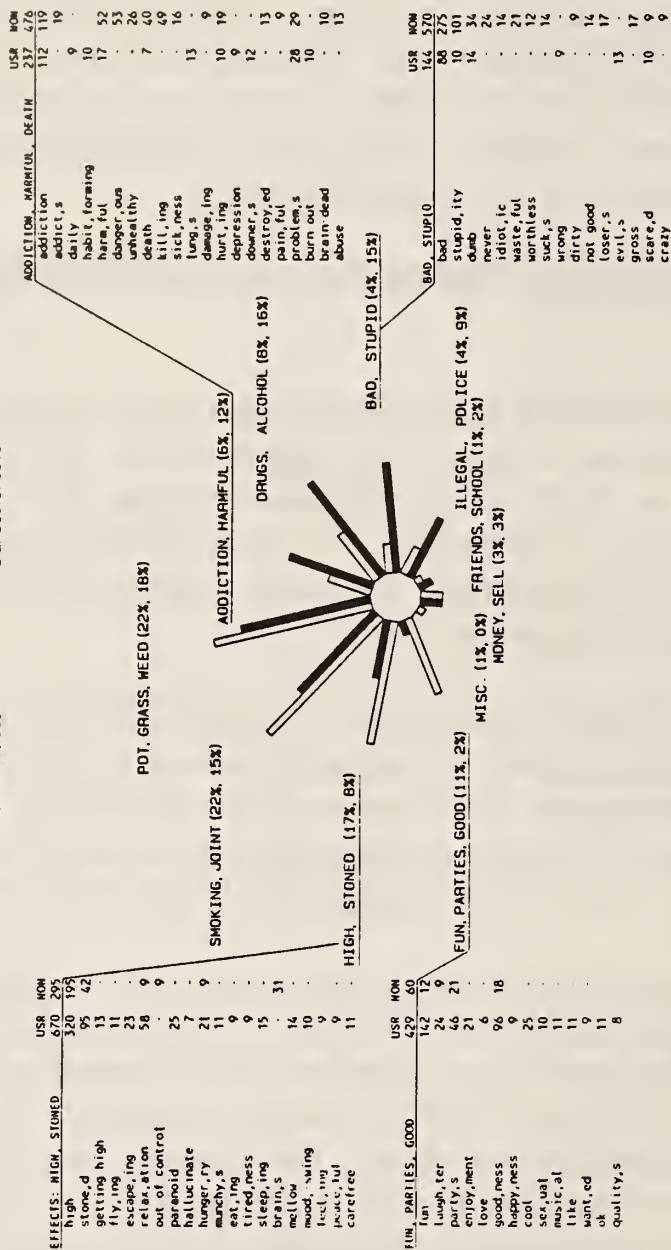
MARIJUANA

PERCEPTIONS AND EVALUATIONS

BY

Users
Total Score, 3891

Non-Users
Total Score, 3813



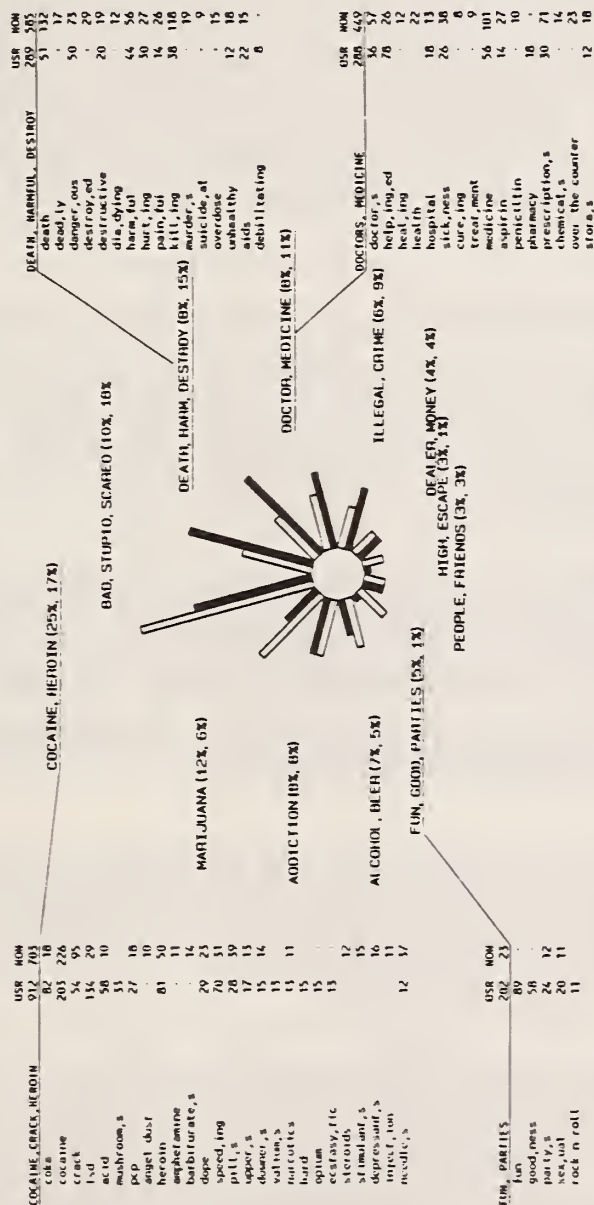
Users show a particularly extensive familiarity with various details related to marijuana, its identification, labeling, and use. They emphasize methods and practices involved in its use, as well as specific physical and psychological experiences and consequences. The users show predominantly positive attitudes viewing marijuana as good, cool, and a source of fun. The attention to negative evaluations and harmful consequences is less noticeable, but still conveys some ambivalence.

Non Users think of marijuana in more general terms, identifying it emphatically as a drug and rejecting it rather uniformly as bad, stupid, harmful, and dangerous. They show more concern with the illegal and unlawful nature of this substance and the legal consequences associated with its use. The non-users show awareness of the more commonly known characteristics of marijuana, but they do not demonstrate personal familiarity its effects or various methods of use.

FIGURE 7. Perceptions and evaluations of MARIJUANA

PERCEPTIONS AND EVALUATIONS

Users	Non Users
Total Score: 3684	Total Score: 3933



Although users think more of specific illicit drugs, they show relatively few negative evaluations compared to the numerous positive evaluations. They relate drugs more to fun, party, and sex than to work, school, or family. Parallel to positive experiences and evaluations, users do not show a concern with addiction and such negative consequences as death. Such ambivalence reveals a great deal of internal contradiction. Although this group thinks less of harmful consequences and illegality, the users' characterization of drugs as bad does reflect some strong negative feelings as well. Their meaning of drugs also includes the intended altering effects of drug experiences like high, hallucinations, and escape which are not shared by non users.

Non-users pay more attention to the medical applications of drugs relating to doctors' prescriptions, and substances with medicinal effects. The more narrow meaning of drugs as illicit substances provokes more uniformly negative evaluations. In this context, the non-users characterize drugs as bad, stupid, scary and awful. They show intense concern with the harmful and dangerous effects of drugs such as death and killing. They also show more concern with illegality and the legal consequences of using illicit drugs.

FIGURE 8. *Perceptions and evaluations of DRUGS*

identification with marijuana as a drug. These differences between drug users and nonusers are not limited to the perception of drugs; they involve several other domains, ranging from self-image to the view of the social environment.

Testing the Use of Perceptual/Representational Data to Identify Changes in Behavior

Finally, it is of interest to examine how useful the perceptual/evaluative information obtained through the AGA is in differentiating people with different behavior. How successfully can it differentiate those who have completed the treatment program and have maintained a drug-free status for several months from the addicts who have just started treatment? To answer this question, one may rely on the three AGA measures to assess the system of cognitive behavioral organization along three of its main dimensions.

1. To chart changes in priorities reflected by differences in the subjective importance or meaningfulness of the themes examined, dominance scores were calculated based on the number of responses to each theme produced by each respondent in both the pretreatment and posttreatment groups.
2. To assess changes in the perceptual dimension of subjective meanings, individual perceptual similarity scores were calculated. These scores show the correspondence between the client's responses to each theme and the response distributions of pretreatment and posttreatment groups across all 40 themes.
3. To measure changes in the dimension of attitudes or evaluations, the differences between pretreatment and posttreatment individual evaluative scores were calculated based on the evaluation scores obtained for each of the 40 themes.

The individual scores were analyzed for their potential to accurately identify whether respondents belonged to the pretreatment or the posttreatment group. Discriminant function analyses of the three types of scores based on 40 themes were used to show the percentage of cases correctly classified: 87 percent based on the perceptual measure (can. corr. = 0.75, chi-square = 327.3, degrees of freedom (DF) = 1, $p < .000$); 75 percent based on the dominance measure (can. corr. = .56, chi-square = 140.4, DF = 40, $p < .000$); and 77 percent based on the evaluative measure (can. corr. = 0.62, chi-square = 187.6, DF = 40, $p < .000$). The accuracy of identification shows a high correspondence between AGA-based perceptual/attitudinal information and behavior: pretreatment drug dependence versus posttreatment drug-free status.

Results based on the individual perceptual similarity measure are presented in figure 9. Discriminant analysis was used on this one variable (based on responses to 40 themes) for convenience in showing the percentage correctly classified, and a histogram was created in a format comparable to the results presented in figure 10. So far, this variable has shown the strongest relationship to behavior. Since the results in figure 9 are based on within-group comparisons for which the individual subjects may have contributed to the norms used in the evaluation, a second test split the pretreatment and posttreatment samples and measured perceptual similarity across independent samples. Under these conditions, the correlations between perceptual similarity and pre/post status dropped from 0.85 to 0.66, still a very strong relationship. Correct classification dropped from 94 percent to 80 percent, again still high. Since these figures are based on 200 subjects, it is difficult to compare them directly with the correlation of 0.75 and 87-percent correct classification obtained for the sample of 400. However, these figures are higher than the cross-group results based on 100 respondents and lower than the within-group results based on 100 respondents.

Discriminant function analysis also was used to assess the accuracy of the identification of drug users versus nonusers based on dominance, perceptual similarity (cross-group), and evaluative scores generated from the responses of 400 college students in the context of 24 themes. Results based on all three measures combined are presented in figure 10. The percentage of cases correctly identified by discriminant function analysis was 77 percent based on the criterion of self-report.

Essential Characteristics of the Method and Their Relevance to TCs

TCs represent a treatment modality that places a strong emphasis on the resocialization of clients. TCs use the power of social influences—the internal dynamics of close community settings where the clients live together and share their problems over many months and even years. These social forces and dynamics are directed by the treatment process toward helping clients overcome the debilitating effects of their chemical dependencies. TCs help to develop a new outlook on life that is conducive to coping with the problems of life and to developing a drug-free lifestyle.

The results of this investigation offer new empirical evidence on the depth and nature of perceptual and attitudinal dispositions and changes in dynamic client variables that make a critical difference in influencing the outcome of the treatment process. The results show the effectiveness of the AGA to assess client variables systematically along three major dimensions of cognitive/behavioral organization: priorities, perceptions, and attitudes that reflect the impact of treatment. The extent and nature

Fcn.	Eigenvalue	Pct. of Variance	Cum. Pct.	Can. Corr.	After Fcn.	Wilks' Lambda	Chi-square	DF	Sig.
1*	1.2783	100.00	100.00	.7491	0	.4389	327.320	1	.0000

All-Groups Stacked Histogram

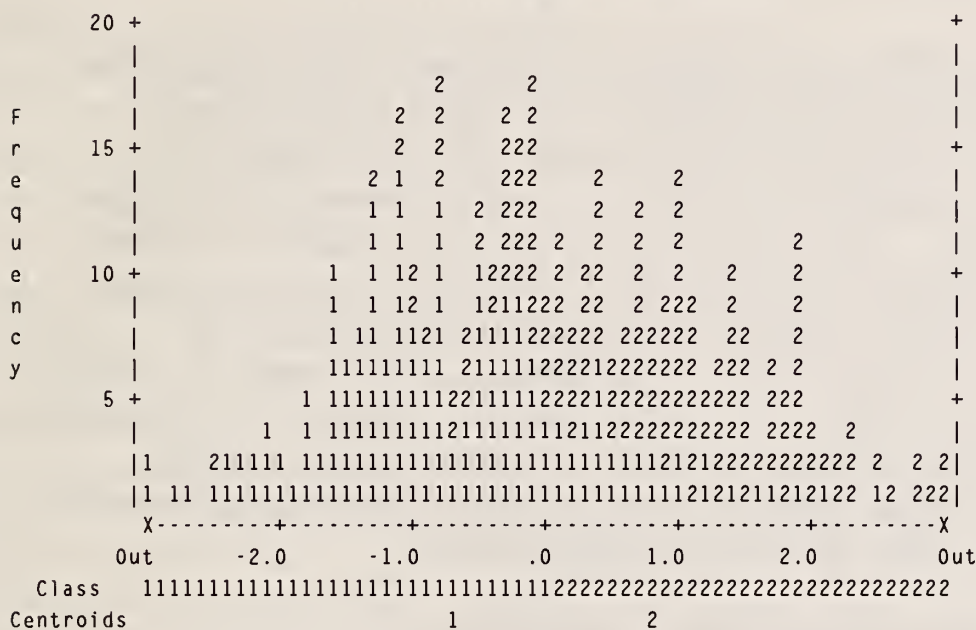
Symbol	Group	Label
1	1	Pretreatment clients
2	2	Posttreatment clients

Actual Group	No. of Cases	Predicted Group Membership	
		1	2
Group 1 Pretreatment	200	184 92.0%	16 8.0%
Group 2 Posttreatment	200	37 18.5%	163 81.5%

KEY: Fcn. = function; Cum. Pct. = cumulative percent; After Fcn. = after function; DF = degrees of freedom; Sig. = significance

Fcn.	Eigenvalue	Pct. of Variance	Cum. Pct.	Can. Corr. :	After Fcn. 0	Wilks' Lambda	Chi-square	DF	Sig.
1*	.5751	100.00	100.00	.6042:		.6349	169.679	49	.0000

All-Groups Stacked Histogram



Symbol	Group	Label
1	1	Frequent Drug Users
2	2	Nonusers

Actual Group		No. of Cases	Predicted Group Membership 1	2
Group 1 Users	1	200	161 80.5%	39 19.5%
Group 2 Nonusers	2	200	52 26.0%	148 74.0%

KEY: Fcn. = function; Cum. Pct. = cumulative percent; After Fcn. = after function; DF = degrees of freedom; Sig. = significance

of changes indicate the client's progress from perceptions and attitudes characteristic of drug addicts toward perceptions and attitudes characteristic of those who have reached a drug-free status more or less permanently. The results provide valuable insights into the resocialization process through access to highly subjective perceptual and motivational variables, where changes occur mostly below the level of the client's conscious awareness and are almost inaccessible through direct techniques that use questions and scales.

The investigations offer new empirical evidence of a close relationship between drug abuse and psychological makeup (i.e., the dominant perceptions and attitudes of the drug abuser). They demonstrate the importance of the socialization process as a natural means of achieving the desired changes. The investigations show that changes in relevant perceptions and attitudes correlate significantly with changes in drug dependence. The demonstration of this relationship is of special relevance to the TC model, which works toward such changes by using resocialization as the main focus of the treatment process. By showing the close relationship between psychological dispositions and drug dependence, it becomes possible to test to what extent resocialization of the addict is necessary for successful rehabilitation.

Three Major Fields of Practical Applications

Identification of Critical Treatment Variables. The author's investigations have identified five or six main dimensions, such as self-image and relationship to others, that are significantly related to treatment success. There are indications that this may be a somewhat incomplete list, but it does provide a solid foundation for practical use. By testing additional pretreatment addicts and clients who have successfully reached drug-free status after completing a full treatment cycle, the AGA method offers a promising analytic tool for obtaining group profiles on relevant pretreatment and posttreatment populations. These population norms and profiles provide opportunities to gain insights into the effects of various treatment strategies, treatment modalities, environmental conditions, gender, and ethnicity on the success of the treatment process. The psychosocial parameters of the treatment process that have been recognized as important are made more accessible through investigations that rely on the AGA in tracing the relevant variables.

Monitoring Treatment Progress of Individual Clients. By administering an instrument developed for this task to diagnose individual clients, progress toward response norms developed from successfully treated drug-free clients can be systematically assessed along relevant dimensions such as self-image, relationship to family and friends, and perception of harmful substances. The diagnostic profile that emerges from such an assessment can be used to show a particular

client's overall position in the process toward the final goal of stable drug-free status. The diagnostic profile also offers information on treatment progress achieved by the client along the main dimensions that are critical to program success. Dynamic client variables, particularly perceptions, have been identified by recent findings as most promising in predicting retention and treatment success (Condelli and De Leon 1993; De Leon 1991).

Therapy and Counseling of Clients. In addition to extending the field of quantification to client variables that had been beyond the reach of more structured instruments, the AGA method produces rich empirical insights into perceptual and motivational dispositions that are valuable in therapy and counseling. These insights show how individual clients or their cohort perceive and evaluate problems and determine their subjective construction of reality. Sterman (1991), for example, spoke of the task involved in reducing the distance between the client's private meanings in his or her own representational system and the public meanings in his or her external world. This type of information is relevant to clinicians and counselors working along the models of logotherapy (Frankl 1962), cognitive behavior therapy (Beck 1976), rational-emotive therapy (Ellis 1962; Ellis and Murphy 1975), and neurolinguistic programming (Bandler and Grinder 1982). The AGA-based information helps the counselor or therapist to approach the subjective world of the client and reframe the client's subjective world as necessary to promote the desired behavioral change or outcome.

Much of the strength of the AGA method lies in its intrinsic characteristics as a nondirective, inferential approach and nontransparent strategy in assessing perceptions and motivations without asking direct questions. The AGA's potential to reveal dominant dispositions of which the clients themselves are frequently unaware underscores its value in application to process evaluation in TCs.

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Client Outcomes From Therapeutic Communities

Ward S. Condelli and Robert L. Hubbard

INTRODUCTION

This chapter discusses research on client outcomes from therapeutic communities (TCs) and other types of residential treatment programs for substance abusers. The first section compares findings from two large studies of TCs: the Drug Abuse Reporting Program (DARP) in the early 1970s and the Treatment Outcome Prospective Study (TOPS) in the early 1980s. These studies were funded by the Federal Government to evaluate the effectiveness of U.S. drug treatment programs. The second section compares characteristics of clients from the TCs and other long-term residential programs that participated in TOPS. The third section assesses the effects of both types of programs on client outcomes when client characteristics and drug treatment during the followup year are taken into account. The chapter concludes with a discussion of research that is needed to better understand and improve client outcomes from TCs.

Research on client outcomes from TCs generally has fallen into one of three types of studies: (1) single TCs, (2) multiple TCs, or (3) multiple long-term residential programs that included TCs. An example of the first type of research is a study conducted by De Leon (1984) that focused on 400 dropouts and 125 graduates from Phoenix House, a large traditional TC located in New York City. Bale and associates (1980) conducted a study that provides an example of the second type of research. This study randomly assigned clients to drug treatment programs in the San Francisco Bay area, then compared the outcomes of 361 clients from three TCs. Another example is a series of followup studies conducted by Sells and Simpson (1976) and Simpson (1979, 1981) on admissions to more than two dozen DARP TCs in 1969-73. Alternatively, Hubbard and colleagues (1989) assessed the outcomes of 731 clients in the 17 TCs and other types of residential programs that participated in TOPS in 1979-81. Whether the research was done at single or multiple TCs, or at multiple long-term residential programs that included TCs, results generally have been the same: clients who stayed in programs for long periods of time had lower rates of drug use and criminal behavior, and higher rates of employment and school attendance,

than clients who stayed in programs for short periods of time (Bale et al. 1980; De Leon 1984; Hubbard et al. 1989; Simpson 1979).

Table 1 shows that the results of these studies varied, however, in terms of the amount of time they found clients needed to stay in programs to produce the desired outcomes and in particular outcomes they found related to time spent in programs. For example, the study done by Bale and associates (1980) found decreases in use of heroin and other types of illegal drugs, arrests or convictions, and unemployment among clients who stayed in programs for as little as 50 days. Simpson (1979) reported that clients needed to spend at least 90 days in programs before they began to show reductions in opioid (e.g., natural and synthetic opiates) and nonopioid use, arrests, and unemployment. De Leon and colleagues (1982) found that clients needed 4 to 6 months of treatment to produce a decline in opiate use and criminal behavior and more than 9 months to increase employment. Hubbard and associates (1988, 1989) reported that clients needed 6 to 12 months of treatment to reduce predatory crimes and a year or more of treatment to increase employment and to decrease use of heroin, marijuana, and other drugs.

Differences in client populations, program characteristics, and outcome measures could account for the variability in findings across these studies. Bale and associates (1980) focused on veterans, who are likely to have more social and economic skills and resources than other clients, and thus may not have needed to spend as much time at programs before showing favorable outcomes from them. Another important difference between this study and the others was the timeframe used to assess drug use outcomes: rather than assessing drug use during all 12 months of the followup year, this study focused on drugs used only during the 12th month. Such measures are likely to underestimate drug use during the followup year (Anglin and Hser 1990). Because the research conducted by Bale and associates (1980) and De Leon (1984) was based on either single or small numbers of programs, it is not clear to what extent their findings are representative of TCs in general. Due to variations within types of programs, some programs may be more effective than others in producing favorable client outcomes.

Although Simpson's (1979) study was based on a large sample of TCs, some programs that were suspected to be substandard were referred to DARP in an effort to put them under surveillance (Ginzburg 1978). Thus, this study may have underestimated the effects of shorter time spent in treatment on client outcomes due to oversampling of ineffective

TABLE 1. *Time needed to affect client outcomes from programs*

Study	Sample	Time	Outcome
Bale et al. 1980	3 TCs <i>n</i> = 361	50+ days	Heroin & other drugs Arrests Employment
Simpson 1979	24 TCs <i>n</i> = 735	90+ days	Opioids & other drugs Arrests Employment
De Leon et al. 1982	1 TC <i>n</i> = 525	120-180 days 270+ days	Heroin Criminal behavior Employment
Hubbard et al. 1989	10 TCs, 7 other residential <i>n</i> = 731	190-365 days 365+ days	Criminal behavior Heroin & other drugs Employment

programs. While the research conducted by Hubbard and colleagues (1988, 1989) also was based on a large sample of programs, the longer amount of time needed to affect client outcomes is at variance with that reported by most other studies. Moreover, because TOPS was based on a

mixture of TCs and other types of residential programs, the aggregate findings of this study may not be generalizable to TCs per se.

Long-term residential programs in the United States often trace their roots back to TCs founded by Synanon, Daytop Village, and Phoenix House in the late 1950s and 1960s (Biase 1985; Casriel 1963; De Leon 1974; Volkman and Cressey 1966; Yablonsky 1965). Programs established all over the country during the 1960s and 1970s, however, may not have developed in the same manner as the original TCs. Only half of the residential programs that participated in TOPS in 1979-81 were members of Therapeutic Communities of America (TCA), which suggests that not all of them subscribed to the same treatment philosophy. Indeed, by the time TOPS was conducted, some long-term residential programs may have evolved to the point where they had little in common with TCs besides providing treatment in residential settings. The aim of this chapter is to assess whether the TCs had different effects on client outcomes than the other types of residential programs that participated in TOPS.

METHODS

The data for analyzing client outcomes from residential programs came from TOPS, which was conducted by Research Triangle Institute. This study was sponsored by the National Institute on Drug Abuse (NIDA) through a series of grants and contracts. Included in the study were publicly funded outpatient methadone, long-term residential, and outpatient drug-free programs.

A sample of 12,000 clients were interviewed at the time of admission to 41 publicly funded drug abuse treatment programs in 10 metropolitan areas in the United States between 1979 and 1981. Approximately 24 percent (2,887) of the clients were admitted to the 17 long-term residential programs. Of these, 62 percent (1,790) were admitted to the 10 TCs. Followup questionnaires were administered to probability samples of clients stratified by year of admission, program, and time spent in the program. TOPS followed up 731 of the 2,887 admissions 1 year after they left their programs. About 60 percent (436) of these clients were from TCs located in Chicago, Miami, New Orleans, New York, Philadelphia, Phoenix, and San Francisco. Data collection and sampling procedures for TOPS have been described in detail elsewhere (Hubbard et al. 1989).

Predictor Variables

A wide range of variables was used to predict client outcomes from TOPS residential programs. Demographic variables included gender, race/ethnicity, age, education, and marital status. Background variables were based on behavior in the year before admission. These included working full-time (35 or more hours per week) for at least 40 weeks and committing predatory crimes such as assault, robbery, burglary, theft, embezzlement, forgery, and selling or receiving stolen property. The number of drug-related problems were recorded in the following areas: medical or physical; mental health or emotional; family or friends; police or legal; job, work, or school; and financial or money. Any history of suicidal thoughts or attempts in that year was used as an indicator of depression.

This study distinguished among seven patterns of drug use. These patterns form a hierarchy that was derived from a cluster analysis of types of drugs used by clients during the year before admission (Hubbard et al. 1986). Clients were assigned to the first two patterns in the hierarchy according to whether they used heroin alone or with other narcotics on a daily or weekly basis. Of the remaining clients, those who used other narcotics on a daily or weekly basis were assigned to the third pattern in the hierarchy, and the same procedure was used to assign clients to the following patterns: multiple nonnarcotics, single nonnarcotics, alcohol/marijuana, and minimal drug use. The first two patterns served as the comparison group for the other patterns of drug use. A separate variable was created to take into account heavy use of alcohol during the year before admission to the program. This variable compared clients who consumed five or more drinks in a single sitting per week with those who used less alcohol. The variable was coded to be consistent with standard definitions of heavy alcohol use (Clark and Midanik 1982).

Finally, the analysis took into account the number of prior admissions to drug treatment programs and whether clients were referred to TOPS programs from the legal system, by their families or friends, or by themselves. The time in treatment variables included the number of months spent in TOPS residential programs and variables representing time spent in drug abuse treatment programs during the followup year.

Outcome Variables

Seven outcome variables were selected to assess the effectiveness of treatment on the behavior of clients during the year after they left the programs. Four of these were drug use variables: daily or weekly use of heroin, cocaine, marijuana, and psychotherapeutic drugs; the last category included tranquilizers, barbiturates, sedatives, hypnotics, and amphetamines. To simplify matters, daily or weekly heroin use will be referred to as heroin use, and the same operational definitions will apply to other types of drug use. The other outcome variables were heavy alcohol use, number of predatory crimes, and steady full-time employment (i.e., working 35 or more hours per week for 40 or more weeks).

Data Analysis

Logistic regression was used to assess the effects of time spent in programs on the seven outcome variables. The analysis took into account the following variables because they were likely to affect patterns of drug and alcohol use, employment, and criminal behavior during the followup year: client demographic and background variables and time spent in drug abuse treatment programs during the year after clients left TOPS programs.

Adjusted odds ratios were used to display results for predictors of the respective outcomes shown in tables 6 and 7. With the exception of number of months spent in TOPS residential programs, all variables were categorical. Odds ratios for categorical variables represent the odds of the respective outcome for clients who had the attribute indicated by the variable, relative to the odds for clients in a selected reference category (Hosmer and Lemeshow 1989). Odds ratios for number of months spent in TOPS programs represent the odds of the respective outcome relative to the odds for clients who had spent 1 month less in the program. Chi-square was used to test the significance of the odds ratios; asterisks on tables 6 and 7 indicate the level of probability at which they were significant.

RESULTS

The first step in the research was to compare demographic characteristics of the 4,361 clients admitted to DARP programs with those of the 1,790

clients admitted to TOPS programs. Table 2 shows that there were slight differences in the composition of males and females and minor differences in the composition of racial and ethnic groups among clients admitted to these programs. Clients who joined TOPS programs in 1979-81 were not markedly different from those who joined TCs that participated in the 1979 TCA study (Condelli and De Leon 1993). The most striking difference between clients in DARP and TOPS was the percentage who were over 25 years of age. Almost half (47 percent) of those in TOPS were over age 25, while the corresponding percentage for those in DARP was 25 percent. Research indicates that age is an important predictor of retention in TCs (Condelli 1986, 1989).

A comparison was done of behaviors of clients admitted to DARP and TOPS TCs. The DARP data discussed below were compiled from a 1-year followup report on 966 black and white male clients from TCs (Simpson and Sells 1982). Clients with these characteristics had been selected for analysis due to their consistent representation across all treatment groups. Information on the drug abuse treatment programs that participated in DARP has been described in detail elsewhere (Sells and Simpson 1976).

To compare findings across studies, all 405 black and white male TC cases in TOPS data files who had been followed up were selected. Most of the behavioral data collected by DARP and TOPS pertained to the year before admission and the year after termination from programs. These studies differed, however, in the baseline used to measure drug use: DARP used the 2 months prior to admission, whereas TOPS used the 12 months prior to admission.

Drug Use

Table 3 presents findings from DARP and TOPS on the drug use outcomes of clients from TCs. Twice as many daily opioid users joined TCs in DARP than in TOPS. This threshold is important because experts believe that physiological addiction is likely to occur when opioids are used on a daily or more frequent basis for more than a short period of time (Brecher 1972). The higher rates of opioid use found by DARP may be partly due to this study using a shorter (i.e., 2 months versus 12 months) baseline period than TOPS (Anglin and Hser 1990).

Nevertheless, these studies suggest there was more multiple drug use among clients in TOPS than in DARP.

TABLE 2. *Characteristics of clients admitted to DARP and TOPS therapeutic communities*

Client Characteristics	DARP ^a 1969-73 %	TOPS ^b 1979-81 %
Male	74	79
Female	26	21
Black	36	27
Hispanic	14	9
White (Non-Hispanic)	49	63
Other	1	1
Under 18 years	13	10
18-25 years	62	43
Over 25 years	25	47

KEY: ^a*n* = 4,361; ^b*n* = 1,790

Table 3 also shows clients’ patterns of drug use before they joined DARP TCs and during the year after they left those programs. The number of daily opioid users declined from 60 percent to 33 percent. Use of opioids declined from 83 percent to 51 percent. The number of nonopioid users fell from 61 percent to 43 percent. Even greater reductions in drug use were found among clients who joined TOPS programs. The number of daily opioid users declined from 39 percent to 9 percent. Use of opioids fell from 68 percent to 38 percent, and use of nonopioids fell from 90 percent to 55 percent.

Criminal Behavior

Table 3 indicates that a larger percentage (92 percent versus 68 percent) of clients in DARP than in TOPS were arrested during the year before admission. This may be due to DARP having more daily opioid users.

TABLE 3. *Changes in clients admitted to DARP and TOPS therapeutic communities**

Client Characteristics	DARP ^a 1969-73		TOPS ^b 1979-81	
	Pre %	Post %	Pre %	Post %
Opioids				
Daily use	60	33	29	9
Any use	83	51	68	38
Nonopioids				
Any use	61	43	90	55
Criminal behavior				
Arrested	92	30	68	43
Incarcerated	61	31	71	47
Drug abuse treatment	52	29	56	31

KEY: *Black and white males; ^a*n* = 966; ^b*n* = 405

Clients in TOPS had a slightly higher percentage of incarcerations than those in DARP during the year before admission. This may reflect less tolerance over time on the part of the criminal justice system in dealing with substance abusers who engage in criminal behavior after leaving drug abuse treatment programs. Table 3 also shows that arrest rates for DARP clients dropped from 92 percent to 30 percent, and incarceration rates fell from 61 percent to 31 percent. Alternatively, arrest rates for TOPS clients dropped from 68 percent to 43 percent, and incarceration rates fell from 71 percent to 47 percent. Clients in TOPS reported having more incarcerations than arrests; this may be due to some clients spending nights in jail without being charged with offenses.

Readmissions

About half of the clients were in drug treatment during the year before joining DARP and TOPS programs. Slightly less than one-third were readmitted to drug treatment programs during the year after they left TCs. Thus, there was little difference between the percentage of clients who received drug abuse treatment before joining or after leaving TCs in 1969-73 and in 1979-81.

CLIENTS IN TOPS RESIDENTIAL PROGRAMS

Table 4 presents characteristics of clients admitted to TOPS TCs and other long-term residential programs. The figures for TCs differ slightly between tables 3 and 4 due to the latter being based on a sample of 458 clients that included females, Hispanics, and other racial/ethnic groups. Table 4 shows that clients who joined TCs were more likely to have been non-Hispanic whites and to have had more drug-related problems during the year before admission than clients who joined other programs. Otherwise, there was little difference between admissions to these programs in terms of demographic characteristics, prior drug abuse treatment, criminal behavior, or psychological or social problems, which provides an opportunity to assess the effects of different types of programs on the outcomes of similar types of clients.

Table 5 presents data on the seven variables selected to assess the effectiveness of TCs and other residential programs on the outcomes of clients. There was not much difference between clients on those variables during the year before admission or the year after termination from programs. A different picture emerges, however, when client characteristics, substance use patterns, source of referral, and drug abuse treatment variables are taken into account when analyzing client outcomes from programs.

Predictors of Client Outcomes

Tables 6 and 7 show predictors of client outcomes from programs when other variables were taken into account. Variables that failed to predict outcomes were not included in the tables. The second column in table 6 shows predictors of heroin use among admissions to TCs. Starting at the top of this column, it can be seen that marital status was the only demographic variable that predicted heroin use. The odds of heroin use

TABLE 4. *Characteristics of clients admitted to TOPS long-term residential programs*

Client Characteristics	Therapeutic Community^a %	Other Residential^b %
Demographics		
Male	80	77
Female	20	23
Black	28	43
Hispanic	10	3
White (Non-Hispanic)	61	54
Other	1	-
Under 18 years	9	2
18-25 years	45	51
Over 25 years	46	47
Prior drug abuse treatment	57	54
Criminal Behavior		
Arrested	67	62
Incarcerated	71	70
Psychological and Social Problems		
Suicidal thoughts or attempts	43	42
Referred by criminal justice system	41	34
Drug-related problems (3 or more)	71	51

KEY: ^a*n* = 436; ^b*n* = 295

for clients who were married were about one-quarter (.23) of those for clients who were not married. The odds ratio for this variable was significant at the .05 level of probability. The only client background

TABLE 5. *Changes in clients admitted to TOPS long-term residential programs*

Client Outcomes	Therapeutic Community ^a		Other Residential ^b	
	Pre	Post	Pre	Post
	%	%	%	%
Heroin [†]	30	12	31	15
Cocaine [†]	31	18	25	12
Marijuana [†]	71	47	63	51
Psychotherapeutics [†]	56	23	49	26
Heavy alcohol use	40	30	40	37
Employed full-time	14	22	11	18
Predatory crimes	63	34	63	43

KEY: ^a*n* = 436; ^b*n* = 295; [†]daily or weekly use

variable that predicted heroin use was one of the indicators of predatory criminal behavior.

Near the middle of the second column of table 6 are odds ratios of heroin use for clients who had been engaged in various patterns of drug use before admission to TOPS programs. These indicate that clients who used heroin during the year before admission were more likely to continue using heroin during the followup year than clients with the following patterns: other narcotics, multiple nonnarcotics, and single nonnarcotics. Near the bottom of tables 6 and 7 are odds ratios for the number of months spent in TOPS programs. For example, the odds ratio for this variable in the second column of table 6 indicates that the odds of heroin use for clients who stayed in TCs for "X" number of months was .94 of that for clients who left the program after "X-1" number of months. Thus, for each month that clients stayed in the program, there was a 6-percent reduction in the odds of their using heroin during the followup year.

Table 6 shows that the number of months spent in TCs was a predictor of six of the seven outcomes. The outcome that time spent in treatment did

TABLE 6. Predictors of client outcomes from TOPS long-term therapeutic communities^a

Predictors	Heroin [†]	Cocaine [†]	Marijuana [†]	Psycho- therapeutics [†]	Heavy alcohol use	Employed full-time	Predatory crimes
Demographic Variables							
Females vs. males			.50*		.50*	.36*	.22***
Blacks vs. whites & Hispanics				.38*			
Hispanics vs. blacks & whites					4.45*	5.05*	2.39*
26-30 years vs. older	3.34*	3.38*					
High school education				.40*			
Some vs. none				.33*			
Graduate vs. none							
Background Variables							
Employment							3.20*
Some vs. none							
Full-time vs. none	.19*						
Predatory behavior							.21***
None vs. any acts							3.33**
Drug-related problems							
Drug Use Patterns							
Other narcotics vs. heroin	.25*			.24*	.21**		.26***
Multiple nonnarcotics vs. heroin						3.09*	.25**
Alcohol/marijuana vs. heroin	.06*						
Minimal drug use vs. heroin							
Heavy Alcohol Use					3.65***		
Source of Referral							
Legal system				.36**	.43*		
Family or friends				.19**			
Self-referred						.29*	
Drug Abuse Treatment							
Admissions before TOPS	.29*						
Months in TOPS programs	1.01	1.02	.99	.87***	1.03	1.00	.96
Subsequent time in other programs							
None vs. 40+ weeks	.22***	.32**					.17**
None vs. any weeks				.47*			.28***

KEY: * $p < .05$; ** $p < .01$; *** $p < .001$; ^a $n = 295$; [†]daily or weekly use

TABLE 7. Predictors of client outcomes from TOPS residential programs other than therapeutic communities^a

Predictors	Heroin [†]	Cocaine [‡]	Marijuana [†]	Psycho- therapeutics [†]	Heavy alcohol use	Employed full-time	Predatory crimes
Demographic Variables							
Females vs. males							.33***
Blacks vs. whites and Hispanics					2.51*		
Hispanics vs. blacks and whites					.28**	.26*	
Married vs. not married							
Less than 21 years old vs. older	.23*			2.81*			
High school education							
Some vs. none				.30**			
Graduate vs. none				.40*			
Background Variables							
Suicidal thoughts/attempts							.58*
Some employment vs. none						.31**	
Predatory behavior							.49**
None vs. 1-10 acts	.41*		.56*	3.92**	.50*	2.80**	.34***
None vs. any acts					.40**		
Drug-related problems							
Drug Use Patterns							
Other narcotics vs. heroin	.12***			3.75***	4.23***		
Multiple nonnarcotics vs. heroin	.05**						
Single nonnarcotics vs. heroin	.29**						
Minimal drug use vs. heroin			.25**				
Heavy Alcohol Use					3.60***		
Source of Referral					1.90*		1.88*
Legal system						2.47*	
Family or friends				.33**		2.47*	
Self-referred							
Drug Abuse Treatment							
Admissions before TOPS	.94*	.93**	.93***	2.00*	0.98	1.08***	.93***
Months in TOPS programs				.91***			
Subsequent time in other programs							
None vs. 40+ weeks	.10**	.17**	.22***	.16***	.23**		.25**
None vs. any weeks	.32***	.43**		.46**			

KEY: * $p < .05$; ** $p < .01$; *** $p < .001$; [†] $n = 436$; [‡] daily or weekly use

not predict was heavy alcohol use. Alternatively, table 7 shows that the number of months spent in other long-term residential programs predicted only one of the seven outcomes: psychotherapeutic drug use. Overall, client demographic and background variables were neither strong nor consistent predictors of their outcomes from programs. Although subsequent time spent in drug abuse treatment programs was a fairly consistent predictor across outcomes, this was taken into account to adjust for its effect on client outcomes from programs.

DISCUSSION AND CONCLUSION

This research compared the characteristics and outcomes of clients who were followed up from DARP and TOPS TCs. Some differences were found between patterns of drug use and criminality and the distribution of ages of clients who participated in the studies. Nevertheless, the percentage of clients admitted to drug treatment programs during the year before admission and during the followup year was similar for both studies.

A comparison was done of the characteristics of clients followed up from the TCs and other types of long-term residential programs that participated in TOPS. This revealed that there was little difference between these clients in terms of demographics, patterns of substance abuse, prior admissions to drug treatment programs, criminal behavior, employment, and two of the three indicators of psychological and social problems. The only noteworthy differences were that clients in TCs were more likely to have been non-Hispanic whites and to have had more drug-related problems. Both of these variables were taken into account when predicting client outcomes from programs.

This research found that the longer clients spent in TCs, the less likely they were to use heroin, cocaine, marijuana, and psychotherapeutic drugs and the more likely they were to be employed full-time and to have committed no predatory crimes during the followup year. Overall, these findings are consistent with those reported by other studies of client outcomes from TCs (Bale et al. 1980; De Leon 1984; Simpson 1979). No significant relationship was found between time spent in treatment and six of the seven outcomes from the other residential programs that participated in TOPS; this may be due to these programs having a shorter average length of stay (4.75 months versus 6.50 months) than the TCs.

The variables found to predict length of stay in the latter programs have been discussed elsewhere (Condelli, in press-*a*, in press-*b*).

No significant relationship was found between the number of months spent in TCs and heavy alcohol use. One reason for this may be that the data for TOPS were collected at a time when many TCs did not address heavy alcohol use. It has only been recently that TCs have begun to implement relapse prevention programs for drug and alcohol abuse (Baker et al. 1989; Carroll and Ohanesian 1989). Thus, this research may underestimate the capability of TCs with effective relapse prevention programs to reduce drug and alcohol use.

Time spent in treatment is at best only a rough indicator of the program's effects on clients. There is a need to focus on treatment and program variables to better understand why time spent in treatment predicts client outcomes from programs. Demographic and background variables, drug use patterns, and sources of referral were not strong predictors of client outcomes from programs. This also has been found to be the case for predictors of retention in TCs (Condelli, this volume; Condelli and Duntelman 1993) and predictors of retention in residential drug treatment programs in general (Collins and Allison 1983).

More refined models need to be developed to better understand and improve client outcomes from TCs. In order to develop these models, research will need to: (1) focus more on clients with particular types of problems (e.g., heroin users, cocaine users) than on all clients admitted to programs; (2) determine the optimal amount of time that clients should spend at programs to address those problems; and (3) identify specific kinds of services that are effective for resolving specific problems.

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Retention in Therapeutic Communities: Challenges for the Nineties

Benjamin F. Lewis and Roy Ross

INTRODUCTION

Retention and its corollaries are naturally occurring, yet influenceable phenomena in a variety of treatment environments. Retention in programs of planned duration adds the critical element of a defined endpoint that can provide a measurement guidepost. Therapeutic communities (TCs) and other residential programs for drug and alcohol abusers represent a major portion of such planned duration programs.

The majority of research studies have concluded that there is a positive relationship between the length of stay (LOS) and successful outcome (De Leon 1980, 1984a; De Leon et al. 1982). The longer an individual stays in the TC, the greater the likelihood that elimination or substantial reduction of drug-related behaviors will be achieved and sustained. This chapter examines what is known about the retention phenomenon and makes a case for a greater understanding of its workings, manifestations, and implications.

The major goals of this chapter are to establish a framework for a common language that provides more precise and universally applicable definitions of retention phenomena, overview the existing TC-based and other relevant studies of retention phenomena, and identify critical concerns for the TC field that emerge from these findings.

Definition of Terms: A Common Language

An initial review of the retention literature reflects a major shortcoming. With no established definition of terms, it is difficult to view critical concepts in a way that permits researchers to achieve uniformity of understanding and to compare findings across programs. Terms such as "retention," "length of stay," "time in treatment," "completion," "graduation," "attrition," "dropout," "splitee," "discharge against medical advice (AMA)" or "against staff advice (ASA)," and "expulsion" need to

be universally and operationally defined. The TC field often uses value-laden key terms. For example, the term "dropout" has many definitions: for some it describes a treatment failure; for others it means an individual who had substantially completed his or her personal treatment goals, but not the program's.

Retention. This concept is the key to understanding the interaction between clients, staff, program goals, and life events as they relate to time in treatment. Retention is particularly important because the tension between staying in treatment and leaving is at the very core of the TC experience. Long-term residency requirements and a rigorous and confrontational setting virtually guarantee that not everyone will stay to completion; it is expected that some of those admitted will leave for various reasons and at various personal and clinical junctures during treatment.

The term "retention" is commonly used by clinicians and administrators to describe the ratio between days in treatment and completion or graduation. To the extent that retention approaches completion, it is viewed as positive, with the highest value being placed on completion. To the extent that retention falls short of completion, it is viewed as negative and as a shortcoming of the client or program. However, this view does not permit legitimate exploration of retention from other perspectives, nor does it permit full investigation of the many forces that interact with time.

Length of Stay. LOS, or days in treatment, is the most objective measurement of retention; it refers to the number of days that clients remain in treatment.

Completion. In general, completion describes a fixed time when formal treatment ends and toward which retention efforts are aimed. If there were no generally accepted date (or period) for program completion, the concept of retention could be altered radically. Indefinite stays are unacceptable; clients, other consumers, staff, and third-party payors must have a legitimate timeframe to organize resources, plan clinical interventions, and place significant others on hold.

However, another view of completion describes an undefined point in time when a client substantially attains the identified and individual goals of their treatment plan. From the client's view, they are done. From the program's view, that client may be a dropout with all the attributes of that

role. This view reflects a significant departure from the traditional definition of retention because it views treatment duration from the client's perspective and raises the question as to how to exploit this perspective in a way that minimizes dropout.

Time in Treatment (Time in Program). This ambiguous term is often used synonymously with LOS. It is variably reported in studies as number of days, weeks, or months in treatment. However, the term is also used to describe what happens during treatment. The concept of "density," "treatment delivered," or "treatment life-space" adds the dimension of the interaction of time with the program to the strictly temporal and linear concept of time in treatment.

Attrition. In general, attrition refers to a gradual reduction over time based on voluntary departures. In TC retention studies, attrition is often synonymous with dropout. To the extent that attrition approaches admission, it is viewed as negative.

Dropout. Dropout is usually studied in the context of treating chronic conditions that require prolonged treatment. The perspective most often used is the therapist's or program's, since dropout is defined in relation to their idea of the optimal treatment duration. As applied to TCs, dropout can refer to a client who is expelled because of lack of cooperation or a poor attitude about treatment. Dropping out may be a manifestation of dissatisfaction, unsuitability of the client or the program, lack of motivation, acting out against coercion, or an expression of anger. In TCs, the term "splitee" refers to two types of program dropouts: those who are discharged for disciplinary reasons and those who leave the program AMA or ASA.

Studies of dropouts have rarely attempted to distinguish among their reasons for leaving. Client and staff perspectives on dropouts differ, and a third view of dropouts further complicates the matter. From the perspective of payors and funding agencies, dropouts represent a waste of scarce resources and call into question the cost-effectiveness of programs. Future retention research should explore more functional definitions of dropouts according to reasons for leaving.

RETENTION STUDIES

Background

With respect to retention, TCs are not substantially different from other modalities that treat substance abusers. Even given the variance in program types, planned duration, and philosophy, substantial attrition rates are evident for detoxification programs, methadone services (Joe et al. 1980), drug-free outpatient programs, residential treatment (De Leon and Schwartz 1984), Alcoholics Anonymous/Narcotics Anonymous (AA/NA) fellowships, and other related drug abuse modalities.

- **Who leaves is important knowledge:** If profiles could be developed for early (or late) leavers, then dropout predictions could be made and special attention paid to at-risk clients.
- **When people leave is important:** Programs could develop and target strategies that engage clients.
- **Why people leave is critically important:** This knowledge gives programs clues about how to modify their service delivery to increase retention.

Overview of Retention Research

For the most part, the effectiveness of TCs has been evaluated through posttreatment followup studies that have almost universally demonstrated significant improvement over pretreatment status (De Leon 1984*b*; De Leon and Jainchill 1981; De Leon et al. 1979). Client characteristics associated with positive outcome have been identified, such as lower lifetime criminality, higher pretreatment educational levels, lower drug use levels, and higher employment (De Leon 1983*a*). While significant, these effects are small when compared to the effects of time in treatment (De Leon 1988).

Retention is important because research has established a firm relationship between time spent in treatment and successful outcome (Bale et al. 1980; De Leon and Schwartz 1984; Simpson 1981; Sugarman 1975). However, client factors in general are not strong predictors of retention. Researchers have explored a variety of potential predictors, focusing on demographic and psychometric variables, but no client profile has emerged that reliably predicts LOS. Multivariate studies that use composite measures of success in relation to LOS identify time in treatment as the most consistent predictor of positive outcome, even when

the contribution of other client-related variables is removed (De Leon 1984c; De Leon and Andrews 1978; Holland 1983). Retention rates have been described in considerable detail (De Leon and Schwartz 1984; Glaser 1974; Sansone 1980).

With respect to attrition, high dropout rates are the rule for all drug treatment modalities. In TCs studied, 1-year retention rates range from 10 to 30 percent. Findings indicate that the dropout rate is highest (ranging between 30 to 40 percent) within the first 30 days of admission (De Leon and Rosenthal 1979), with 30 percent reported within the first 2 weeks (De Leon and Schwartz 1984). The rate declines sharply as clients stay in treatment longer, with the likelihood of dropout decreasing with LOS itself (De Leon and Schwartz 1984). It is generally believed that 3 to 6 months of treatment may be minimal for successful outcomes. However, since the highest dropout rate occurs earliest in treatment, most clients leave programs before being exposed to the cumulative effects of TC methods.

Studies that have examined the differences in outcome between clients who complete treatment (graduates) and those who drop out indicate that those who graduate perform significantly better than dropouts on all outcome measures (De Leon 1988). Among dropouts, however, there is a positive relationship between outcome and LOS (De Leon 1984b; De Leon et al. 1973; Holland 1983); the most impressive findings have shown sustained improvement 5 years after treatment based on LOS.

Past studies have looked at changes in client populations over time. Such studies should be repeated to examine changes in drug use trends, social pathology, shifts in service utilization by different minority groups or groups previously underserved (such as pregnant addicts), and the impact of human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS).

In their landmark review of retention, Baekeland and Lundwall (1975) examined dropping out of treatment through the mid-1970s. They identified 15 factors that predicted 75 to 100 percent of dropouts across a variety of treatment modalities, settings, and therapies. Most of the factors are relevant to TCs today in that they address the who, when, and why questions from program and client perspectives. The factors identified were: (1) social isolation/unaffiliation, (2) therapist attitudes and behaviors, (3) discrepancies between patient and therapist treatment expectations, (4) passive-aggressive behavior, (5) family attitudes and

behavior, (6) motivation, (7) behavioral and perceptual dependency, (8) denial, (9) symptom levels and symptom relief, (10) sociopathic features, (11) socioeconomic status, (12) age, (13) sex, (14) social stability, and (15) drug dependence. The articulation of these factors continues to provide a rich research agenda for retention studies.

The present review of studies is organized around two focuses that best reflect available knowledge and existing gaps: *pretreatment factors* and *within treatment factors*. In the future, treatment duration may be driven by utilization review criteria, and third-party payors may become a more significant factor.

Pretreatment Factors

Most of the dropout studies have focused on one or more of the following in relation to LOS: (1) demographic characteristics (age, sex, race/ethnicity); (2) primary drug use; (3) previous treatment history; (4) immediate pretreatment status; (5) family background; (6) social relations; (7) criminal background; and (8) psychological status. These variables are the easiest to gather data on, particularly across programs, and have the most standardized measures. Consideration of coercion and motivation also fall within the pretreatment domain, but these variables have been researched only recently.

Successful program completion also has been associated with family participation and with the development of a social support system. Findings suggest that improved preadmission procedures, better assessment of motivation, willingness to comply with the program, and family orientation may impact positively on retention. These factors have been problematic for many traditional TCs, which stress internal characteristics rather than community or family social support networks.

Race/Ethnicity

Previous TC studies have identified few major relationships between race/ethnicity and retention, although Hispanics were found to have significantly shorter LOS (De Leon 1983*b*), and African Americans were more likely than whites or Hispanics to be retained in programs (Wexler and De Leon 1977). One study found no significant differences between majority and minority groups, although African Americans had significantly less time in treatment than whites in situations in which the majority of clients were white (Brown et al. 1985*a*). Another study

indicated that retention rates for African Americans were higher than those observed for whites (Sansone 1980). Linguistic differences may relate to retention more often than race/ethnicity.

Sex

With respect to gender differences in TC retention, it is clear that there are universally lower retention rates for women. Males stay in treatment significantly longer than females (De Leon and Jainchill 1981; Joe and Simpson 1975; Sansone 1980). In one study, the cumulative proportion of women in treatment began to drop off substantially at 10 weeks, and the spread between men and women widened over time (Sansone 1980). Generally, there have been no gender differences in outcome (De Leon and Jainchill 1981; Greene and Ryser 1987; Sugarman 1975).

With respect to female clients who are court referred, it is postulated that courts may be more lenient with females, coercing them less and requiring less treatment tenure. Female attrition may be accounted for by the observation that TCs generally are characterized by a male-dominated orientation with little provision for the special needs of women. In order to retain female clients, it has been suggested that treatment programs should intensify their childcare and family services.

History of Previous Treatments

A history of previous treatment has been found to be positively related to treatment outcome (Joe and Simpson 1975). Slightly higher retention rates were found for readmissions, regardless of other demographic differences (Sansone 1980). This raises the question as to whether repeated doses of treatment are more effective than single episodes and suggests a need for further analyses of existing and new data.

Primary Drugs

Most studies have not found significant differences in retention by type of drug used (De Leon 1984*b*). However, the majority of TC retention studies were undertaken while the abuse of opiates was preeminent. Cocaine use in its various forms may have a different natural history that may impact retention. Cocaine addicts may experience certain physiological and psychological changes in the first 3 months after withdrawal that may make cravings more problematic. There needs to be

further investigation of the sequelae of drug withdrawal and cravings and their impact on attrition.

Age

Although there have been inconsistent findings, it is generally believed that age is not significantly related to retention or to outcome (Sansone 1980). However, some findings indicate that clients in the middle age range had more successes. The least favorable outcomes were more frequent among the youngest clients. Other studies reflect higher attrition among adolescents, who are seen as less likely to persevere in TC treatment because of resistance to authority or because the juvenile justice system is less willing to exert pressure than the adult criminal justice system. Alternatively, higher retention has been found among younger clients with strong pressure from significant others.

Legal Referral

The history of treatment for addicts reflects the interaction of coercive treatment on retention and outcome. There is some evidence that treatment completion and short-term outcomes were higher for adult involuntary patients. Some early findings point to better outcome after involuntary treatment and found that LOS was associated with lengthy abstinence.

TC admissions reflect high proportions of clients with legal referral backgrounds and coercion factors of varying degrees (De Leon 1988). Drug Abuse Reporting Program (DARP) analyses reflected that pretreatment legal pressures were not significantly related to retention, that time in treatment did not differ between voluntary and legally referred clients, and that longer retention predicted better outcomes (Joe and Simpson 1975). Across other studies, there are considerable inconsistencies in findings. Some studies have found that legally referred clients remain longer in TCs than voluntary admissions (Collins and Allison 1983; Hubbard et al. 1989; Sheffet et al. 1980). Several other studies (Aron and Daily 1976; Condelli 1989; De Leon et al. 1979; Sugarman 1975) have found TC retention to be associated with pressure or legal status. Some studies have found this effect to be strongest in early treatment: Self-referred clients may be insufficiently motivated to stay, and higher retention rates of court referred clients may be due to a disinclination to be institutionalized in a more restrictive environment (Condelli 1989; De Leon et al. 1979; Sugarman 1975). However, other

studies have not found this association (Hartford et al. 1976; Joe and Simpson 1975; Rinella 1976; Sansone 1980; Wexler and De Leon 1977). In addition, other types of external pressure may be just as powerful, such as anticipated or actual threats of placement of children or familial pressure.

On the whole, the main findings suggest a complex relationship between external pressure or legal referral and treatment outcome. There is an enhancing effect between legal referral and outcome that appears to be mediated through retention in treatment. There also is a suggestion of an age, legal referral, and retention interaction (De Leon 1988).

Psychopathology

The best single predictor of both psychological and behavioral outcomes is retention in treatment (De Leon 1984*b*; De Leon and Jainchill 1981). In one study, all measures of the relationship between psychopathology and treatment improvement showed a strong and positive relationship between treatment duration and improvement. Another study found that initial psychological scores are not predictors of retention or post-treatment outcome (Craig 1984*a*; De Leon 1983*c*, 1984*c*). There is some evidence that clients who exhibit greater psychological disturbance, particularly depression, are more likely to leave treatment early (Sacks and Levy 1979; Wexler and De Leon 1977). Some studies have found that retention may be positively related to anxiety or less defensiveness and less denial of problems (De Leon 1983*c*). One study found that clients who viewed their addiction as a sickness dropped out early, possibly indicating that they may not be taking responsibility for their drug-taking behaviors.

Psychological improvement in treatment predicts continued stay in treatment (De Leon 1980; Wexler and De Leon 1977). Individuals who improved within the first several months after admission showed a significantly greater likelihood of continuing their stay in treatment (De Leon 1980). Conversely, severe psychopathology is associated with early dropout (De Leon et al. 1973; Sacks and Levy 1979).

Motivation

Given what is known about pretreatment variables such as demographics, drug use, employment, and their relationship to retention, it is clear that other client and program factors require investigation. Conventional

wisdom has always suggested that motivation and readiness for treatment were the sine qua non of retention and success and has viewed dropout as due to lack of motivation. Research that looks at the circumstances that drive clients to treatment (extrinsic pressures), the client's own inner reasons (intrinsic pressures), the individual's perceived need for services (motivation), and the appropriate match between client need and treatment modality (suitability) has established the foundation of these critical dynamics. Others researching psychotherapy studies with substance abusers and other populations have found motivation for treatment to be the best predictor of outcome.

Motivation, readiness, and suitability appear to be more significant than external pressure in terms of correlates of retention to 150 days. Client perception of the severity of their problems, need for treatment, and acceptance of the TC as appropriate treatment appears to relate to LOS.

Within Treatment Variables

Within treatment variables can be organized into (1) program characteristics such as size, location, physical plant, staff, organizational structure, and goals; (2) treatment events such as staff turnover, client purges, and major program change; and (3) cognitive appraisal. Some interactions may exist between client problems, program quality, and the actions taken to address these problems. The relationship between within treatment activities and time in treatment needs to be interpreted in the context of the treatment services, staff actions, and client satisfaction. A few studies have investigated the effects of treatment delivery variables (Baekeland and Lundwall 1975), staff/therapist absences (Craig et al. 1982), the social climate of drug-free programs (Friedman et al. 1986a), and program structural characteristics on client retention. In addition, the relationship between staff turnover and client retention is a complex dynamic that needs to be explored more fully (Orsini 1991; Sansone 1980). Although previous studies have not found that treatment program variables predict retention, many investigators have felt they were worthy of further investigation (De Leon 1984a; De Leon and Rosenthal 1979; Heit and Pompei 1977; Sansone 1980).

Attitudes such as treatment appraisal and satisfaction may influence treatment tenure (Joe and Friend 1989; Lewis 1986). In some studies, client's reasons for dropout were distributed equally between program reactive and personal reasons, with significantly fewer personal reasons associated with dropout after 12 months in treatment (De Leon 1984c). It

has been postulated that aspects of the treatment environment, including the way clients perceive they have been treated, may have powerful effects on retention (Orsini 1991). While successful followup status and LOS significantly relate to satisfaction with treatment (De Leon 1984a), individual and composite measures of environmental openness, individualized treatment, perceived rights, and treatment delivery need to be developed to qualitatively characterize different programs in order to understand outcomes better. More specific interactions between satisfaction with key elements of treatment (e.g., individualized treatment planning, perceived dignified treatment, perception of rights, and specific satisfactions and dissatisfactions) also need to be investigated.

Limitations of Findings

A review of the literature suggests that reliable predictors of retention/attrition have not been identified because of common methodological limitations, including study-specific results and failure to deal with the complex relationships among variables such as individual characteristics, program goals and methods, and life-space events (Bale et al. 1980; Craig 1984a, 1984b; Craig et al. 1982).

Many findings may be limited in external validity based on differences in programs as defined or delivered (Allison and Hubbard 1985; Sheffett et al. 1980; Winick 1980), lack of controls, client self-selection, methodological deficiencies, differences in followup procedures, additional treatment and nontreatment influences, changes in social climate, validation of self-report, and changes in the TC field's view of the recovery continuum.

A multivariate approach using a large sample of programs with well-described qualitative dimensions is essential. Some investigators have argued that treatment effectiveness cannot be validated without an analysis of the strength and integrity of the treatment, and they have suggested ethnographic studies to achieve a clearer understanding of the treatment process.

The settings for most of the retention studies were traditional long-term TCs of the seventies and early eighties that reflected homogeneous treatment philosophies and methods. With the evolution of TCs along planned duration and program lines, it is unclear whether the knowledge gained from the previous studies of client characteristics is applicable to the programs of the nineties.

RECOMMENDATIONS AND CRITICAL CONCERNS

TCs have been studied for nearly 20 years. Although the data are frequently contradictory, one key finding has almost universal support: Treatment outcomes improve as time in treatment increases.

Improvement in retention is to be encouraged, and the means to research and achieve this goal should be supported. At face value this is a simple enough proposition, but on closer examination its ramifications are complex. Is improved retention desirable, or is there a point when negative repercussions outweigh the benefits of this improvement?

Any change in retention or attrition will impact directly on treatment capacity and must, in turn, impact on waiting lists. Unless treatment slots are increased, improved retention will reduce the numbers of clients exposed to treatment and increase the number of clients waiting to be treated. What are the implications of this? First, longer waiting lists run directly counter to the recent Federal initiative to reduce waiting lists. Second, delaying the start of treatment carries attendant risks such as contracting or spreading HIV infection, loss of motivation to seek treatment, or continued criminal behavior. Reducing the number of clients treated conveys a clear and troublesome message: Society is placing a premium on a few more recovered clients at the expense of a greater number of less recovered people.

Another paradox is that in an attempt to survive organizationally, TCs admit clients whom their clinical experience tells them will leave early (perhaps in the hope they will be wrong). When these clients do leave early, their departure is rationalized as weeding out those who are unready or unsuitable for the TC modality.

If the tension between remaining in treatment and leaving is a crucial ingredient in TCs, then it must be acknowledged that some level of attrition is not only inevitable but deliberate. Dropout rates may have less to do with program insensitivity, low client motivation, staff frustration, or the dozens of other factors identified in the literature, than with a treatment modality whose renewal and vitality *require* the loss of a certain proportion of its clients. The retention debate also brings into sharp focus two different theoretical models of addiction: (1) the enlightenment model, which attempts to change the whole person; and (2) the compensatory model, which accepts the reality of lapses and trains clients to use them in their recovery.

Multiple constituencies or perspectives will be affected by changes in retention patterns: the treatment provider, the payor, the client, and the staff. It is not certain that these constituencies have the same priorities or needs regarding retention. From the perspective of the treatment provider and staff, retention is a measure of clinical efficacy and revenue; from the perspective of the payor, retention is a key index of cost-effectiveness; and from the perspective of the client, retention is presumed to be an index of satisfaction. What needs to be determined is whether improvements in retention will serve each of the constituencies appropriately; that is, whether they each want better retention and whether treatment providers have the resources to deliver it. Whether these different perspectives can be reconciled is a matter for continuing discussion at the highest levels.

Other recommendations for research include the following:

1. Studies of the relationship of the treatment tenure of minorities in majority-dominated programs and where minority status is not represented in clinical staff or administration are needed.
2. Comparison and evaluation of different approaches to increasing the retention of women with children are needed, including having children live in, visit daily, or allowing visits in the natural environment.
3. Investigation of the effects of repeated doses of treatment on retention are necessary to determine whether there is a cumulative effect or an optimal level of treatment episodes that predicts retention.
4. Further research is needed to examine the relationship of stages or levels of client motivation or coercion on retention, including the development of standardized measures of motivation.
5. Studies of the impact of developing therapeutic relationships between staff and clients and the efficacy of individualized treatment planning on retention and subsequent outcomes are needed. Since individualized treatment planning is time- and cost-intensive, and historically the program and not individual counseling has reflected TC methods, this is a critical question to address.
6. Further studies are needed to determine the relationship between treatment processes and retention, other within treatment variables,

and client satisfaction with key aspects of the treatment experience such as perceived respect and dignity.

7. Well-controlled studies are needed to more precisely define the effects of various levels of legal system pressure, pressures from other social welfare system components, and pressure from significant others on the retention phenomenon.

This chapter has presented recommendations from research to improve retention and reduce attrition. These range from shorter treatment periods, better matching of client to modality, and increased family involvement. Generally, these recommendations will require either reallocated or additional resources. The delicate economies of TCs are already stretched to the limit with responsibilities to feed, shelter, treat, educate, and rehabilitate. In the last several years, the HIV epidemic has added the imperative to admit, treat, and educate drug addicts to reduce HIV infection. Increased retention, no matter how desirable, may simply be beyond reach. Although payors are demanding better retention, are they prepared to pay for it? What tradeoffs are necessary to achieve it?

The goal of new research should be to ascertain the optimum balance between retention and attrition. In doing so, it must be recognized that the needs of the modality, the clients, and the funding agencies that support it may not be in harmony. The central challenge for the TC field in the future is to balance these competing priorities in a way that is humane and cost-effective.

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Predictors of Retention in Therapeutic Communities

Ward S. Condelli

INTRODUCTION

Reviews of the literature indicate that research has produced inconsistent findings about the role that key variables play in client retention in therapeutic communities (TCs) and other types of residential drug treatment programs. A comparison of findings from the three largest U.S. studies shows that there is little overlap between predictors of retention (Collins and Allison 1983; Condelli and De Leon 1993; Joe and Simpson 1976). This chapter discusses the conceptual and methodological issues that need to be addressed if research is to be more useful for understanding and improving retention in TCs.

RESEARCH ON RETENTION

Two large studies assessed the effects that time spent in treatment had on TCs (Condelli and Hubbard, this volume; Simpson 1979). Both studies found that clients who stayed in programs for long periods of time had significantly lower rates of drug use, unemployment, and criminal behavior than clients who stayed in programs for short periods of time (Condelli and Hubbard, this volume; Simpson 1979). While there is considerable variation in retention rates across programs (Condelli 1986; De Leon 1991; De Leon and Schwartz 1984; Pompi and Resnick 1987), overall only half of the clients who come to TCs stay as long as 3 months (Simpson 1981). This threshold is critical because clients need to spend at least 3 months in treatment before they begin to realize significant improvements in their outcomes (Bale et al. 1980; Simpson 1981).

During the past two decades, the National Institute on Drug Abuse (NIDA) has sponsored three large studies of retention in TCs and other types of residential treatment programs. At the same time, NIDA has funded multiple smaller studies of retention at TCs. Additional studies have been conducted by researchers who received varying levels of support from programs. Unfortunately, much of this research did not reach its full potential for understanding and improving retention in TCs,

because this research produced inconsistent findings about the role that key variables played in retention (Condelli 1986; Condelli and Duntzman 1993; Craig 1987). Furthermore, most of the variables reported to be correlated or associated with retention were not found to be statistically significant when analyzed within a multiple regression framework.

CONCEPTUAL AND METHODOLOGICAL ISSUES

Many of the inconsistent findings reported in the literature may have been due to inappropriate comparisons among different kinds of clients and programs. For instance, some reviews lumped studies conducted on drug abusers together with studies conducted on alcoholics, the mentally ill, and patients with various kinds of physical disorders. No research was found in the literature that showed it was valid to group such heterogeneous types of clients and programs together.

A related issue is the all too common practice of reviewing research at different types of drug abuse treatment programs as if these programs and their clients were interchangeable with one another. Such reviews cite research done at methadone maintenance programs, TCs, and outpatient drug-free programs, then attempt to generalize research findings to "drug treatment programs." This unit of analysis does not correspond to the actual treatment received by any client. Therefore, this practice is unlikely to be helpful for understanding or improving retention because each client is treated at a specific *type* of treatment program and because clients drop out of different programs for different reasons.

NIDA's *Manual for Drug Abuse Treatment Program Self-Evaluation* (Guess and Tuchfield 1977) on evaluating drug abuse treatment programs states that: "Programs, clinics, and agencies with different goals, objectives, and activities cannot legitimately be compared even on the same measures." The validity of this statement is supported by research that found not only that different drug abuse treatment modalities (e.g., outpatient methadone maintenance, residential, outpatient drug-free) attract different kinds of drug users but also that rates and predictors of retention vary by type of modality (Collins and Allison 1983; Hubbard et al. 1989). Hence, there are neither conceptual nor methodological grounds for treating different types of drug treatment clients and modalities as if they were interchangeable with one another. This

practice probably accounts for a considerable amount of the disagreement in findings in the literature on retention in drug abuse treatment programs.

Reviews of the literature rarely have taken into account differences between therapeutic regimens within treatment modalities that have been found to affect client retention. For example, studies have shown that traditional TCs have lower rates of retention than modified and short-term TCs (Condelli 1986; Joe and Simpson 1976). These findings suggest that the duration and rigor of the therapeutic regimen are important factors in client retention.

Reviews of the literature also indicate that there have been inconsistent findings reported about the role key variables play in retention at TCs. This raises the issue of which research findings should be given the greatest weight. Much of this research consists of reports of variables found to be correlated or associated with retention. While studies usually report the statistical significance of relationships between variables, they seldom report the strength of the relationships. Fewer studies yet report the significance and strength of predictors when other variables that affect retention are taken into account. Multivariate analysis is preferable to bivariate analysis because it screens out large numbers of weak and redundant variables; thus, it helps to clarify which variables have the strongest and most reliable effects on retention.

THE THREE LARGEST RETENTION STUDIES

The conceptual and methodological issues discussed above have hindered the drug abuse treatment field in identifying variables that are useful for understanding and improving client retention. Consequently, a comparison was done of the variables found to predict retention in the three largest studies of TCs. This research was based on data collected for the Drug Abuse Reporting Program (DARP) (Joe and Simpson 1976), a demonstration project sponsored by Therapeutic Communities of America (TCA) (Condelli and De Leon 1993; De Leon 1980), and the Treatment Outcome Prospective Study (TOPS) (Hubbard et al. 1989). The rationale for focusing on these studies is they included a large number of subjects in programs located in different regions of the country, and they used multivariate regression analysis to identify predictors of retention.

The DARP study classified TCs according to treatment length, regimen, and philosophy and then assessed predictors of retention in three different types of programs (Joe and Simpson 1976). "Traditional therapeutic communities" were highly structured, long-term in duration (1 to 3 years), and placed high demands on residents. "Modified therapeutic communities" were patterned after the traditional ones, but they were shorter in duration (6 to 9 months), placed fewer demands on residents, and put more emphasis on learning practical skills. The findings presented below were based on predictors of retention in the nine traditional TCs.

The TCA study focused on five programs described by their chief executive officers as traditional long-term TCs in terms of treatment philosophy, goals, structure, process, and staffing patterns (De Leon 1980). Although the focal point of the study was to develop a system for collecting and analyzing data related to resident retention, the ultimate goal was to increase the self-evaluation capacity of the programs. The methodology used for this study has been described in detail elsewhere (Condelli and De Leon 1993).

The TOPS study analyzed client retention in 17 residential treatment programs: 10 of these were long-term traditional TCs, and the remainder were a mixture of other types of residential programs (Collins and Allison 1983). TOPS was the only one of the studies that interviewed clients while they were in the program. The research discussed here, however, focused on client and admissions of retention in order to make it more comparable to the findings from the DARP and TCA studies.

Predictors of Retention in Residential Programs

A table was constructed to compare DARP, TCA, and TOPS predictors of retention (Condelli and Duntzman 1993). This table showed that the client's education was the only variable that predicted retention across the three studies, and there was little overlap between predictors of retention across the studies. One possible explanation for these findings is the time differences when the studies were conducted: DARP focused on clients admitted to programs in 1971-72, whereas the TCA and TOPS focused on clients admitted to programs nearly a decade later. This explanation does not account for differences between predictors in TCA and TOPS, however, because these studies were conducted at about the same time.

Other possible explanations for inconsistent predictors of retention across the three largest studies include differences in samples of programs, variables taken into account, and measures of retention. While DARP found that predictors of retention varied by type of TC, TOPS predicted retention in a sample comprised of different types of residential programs. Finally, although all of the studies focused mostly on client demographic and background characteristics to predict retention, TCA and TOPS took into account variables from other domains.

The same measures of retention were not used in the studies: DARP and TOPS used the number of days that residents stayed in the program, whereas TCA used a log to transform the length of stay to assure that it met the assumptions of the statistics used to analyze the data (Condelli and De Leon 1993). Lack of uniform measures and common terminology has made it difficult to compare the results of retention studies in the substance abuse treatment field (Lewis and Ross, this volume).

Subsequent analysis was performed on data collected for TOPS to resolve findings that were inconsistent with those reported by the other large studies. This involved focusing on 10 traditional TCs, including analyzing variables found to predict retention in the other two studies, assessing the effects of variables in different domains, and comparing predictors on the two measures of retention. The analysis of TOPS data showed that predictors of retention differed somewhat according to the sample of programs and domains of variables used. In addition, the analysis revealed that the log measure of length of stay was more sensitive to client and admissions variables than the number of days stayed at the programs. Consequently, the log measure was used to analyze predictors of retention. The procedures used to analyze these data have been described elsewhere (Condelli and Duntelman 1993).

Predictors of Retention in Therapeutic Communities

Table 1 shows DARP, TCA, and TOPS predictors of retention in traditional TCs. The left column displays variables that predicted retention in at least one of the studies. The other columns provide information on the samples, predictors, and overall results for the three studies. An "X" marks variables that predicted retention, whereas a dash denotes variables that did not. A blank indicates that the study did not report assessing the effect of the variable on retention. Two figures are displayed at the bottom of each column of the table: These are the

TABLE 1. *DARP, TCA, and TOPS predictors of retention in traditional therapeutic communities*

Study	DARP	TCA	TOPS
Date of Admissions	(1971-72)	(1979)	(1979-81)
Number of Programs	9	5	10
Sample Sizes	881	802	1,800
Fixed Client Variables			
Race/Ethnicity	X	-	-
Age	-	-	X
Family Responsibility	X	-	X
Education	X	X	X
Sister Had Alcohol Problem		X	
Drug Use Sequence		X	
Drug Use Patterns	X	-	X
Dynamic Client Variables			
Comfortable in Large Groups		X	
TC Staff Predictions		X	
External Pressure Predictors			
Legal Involvement	-	-	X
TASC Participation*			X
In Prison Before Admission		X	
Number of Predictors	4	6	6
Variance Explained	4% ^a	11% ^b	5% ^b

KEY: *TASC = Treatment Alternatives to Street Crime; a = actual number of days; b = log of number of days.

number of significant predictors of retention and the percentage of variance explained by the predictors. A low percentage indicates that the variables assessed by the study did not explain most of the factors that resulted in clients leaving the program. Thus, when predictors explain 5 percent of the variance in retention, 95 percent of the variance in retention is unexplained.

The predictors shown in table 1 were grouped according to whether they were fixed or dynamic client variables (Condelli and De Leon 1993). Fixed client variables are those that are difficult or impossible to change, such as demography (e.g., race, ethnicity, gender, language, and age) and history (e.g., prior employment and drug use patterns). Dynamic client variables are those that presumably could be addressed by TCs, such as feeling comfortable in large groups of people. Another dynamic variable was predictions by TC staff as to whether clients would stay long enough to benefit from the program. Table 1 also shows external pressure variables that predicted retention. These included whether clients were involved with the legal system, in a Treatment Alternatives to Street Crime (TASC) program (Weinman 1990), or in prison before admission.

Table 1 illustrates that there are still some differences between DARP, TCA, and TOPS that make it difficult to compare the results. These studies were conducted on different samples of clients who were at different programs at different times. They also assessed variables from different domains and did not use the same variables to measure the same dimensions. As a result, table 1 shows that there was little overlap between predictors of retention in these studies. Indeed, client education was the only variable that predicted retention across the three studies.

Note that all of the DARP predictors were concentrated in the fixed client variable domain, whereas half or more of the TCA and TOPS predictors were from the dynamic client and external pressure variable domains. This may reflect changes that occurred in both the programs and clients during the decade that elapsed between the studies. However, it is more likely that the dynamic client and external pressure variables simply were more powerful predictors of retention than the fixed client variables.

The lack of agreement between DARP and other studies with regard to external pressure may have been due to historical factors. TCs were just getting started in the late 1960s and had not been evaluated for effectiveness. Consequently, it would have been unlikely that the legal system would have exerted pressure on clients to join these programs. Similarly, the first TASC programs came into existence in 1972 (Weinman 1990), the year after the last data were collected for the DARP retention study.

Finally, table 1 shows that research using multivariate analysis on large samples of clients still did not produce consistent findings about the role that variables play in retention. This may be because this research

focused on weak predictors of retention: Many of these variables probably would not have been statistically significant if they had not been based on such large sample sizes. Since this research concentrated primarily on fixed client variables, it suggests that there is a need to focus on variables from other domains to better predict retention.

Predictors of Retention in Smaller Studies

In addition to the three large studies cited above, five smaller multivariate studies (Condelli 1986, 1989; De Leon 1983; Sheffet et al. 1980; Washburne and Condelli 1980) have been conducted on retention in traditional TCs for substance abusers (Condelli, *in press-a*, *in press-b*). These smaller studies may be limited in their findings in that two were conducted at single programs, all of the studies were performed at programs located in New York or New Jersey, and none of the studies had large sample sizes. Nevertheless, this research has identified variables that need to be taken into account by future studies of retention.

The fixed client predictors of retention in these studies included age, race/ethnicity, parents' socioeconomic status, drug use involvement and pattern, employment history, local versus out-of-town residence, and marital status (Condelli 1986, 1989; De Leon 1983; Sheffet et al. 1980; Washburne and Condelli 1980). The dynamic client predictors included drugs being important to one's friends, self-esteem, self-concept, the Minnesota Multiphasic Personality Inventory (MMPI) Dependency scale, perceived happiness, and hopefulness about the future (De Leon 1983; Sheffet et al. 1980; Washburne and Condelli 1980). Alternatively, the external pressure predictors of retention included both legal and significant other's pressure (Condelli 1986, 1989; Sheffet et al. 1980).

The smaller studies also identified the following program and treatment variables that predicted retention: (1) participation in a traditional as opposed to a modified TC; (2) how many months clients felt they needed to stay in the program; (3) how important it was to the staff that clients stay in the program; and (4) how difficult clients found it to conform to the behavior expected by the program (Condelli 1986, 1989). Other predictors of retention were scales that compared residents' evaluations of their programs with their evaluations of their high schools on salience, pleasure, and good-bad dimensions (Condelli 1989).

There was agreement among all the studies reviewed that fixed client variables, by themselves, are not powerful predictors of retention in TCs.

However, some research suggests that fixed client variables may interact with variables in other domains in ways that affect retention. For example, one study found that race/ethnicity and substance abuse patterns explained 10 percent of the variance in retention when MMPI Dependency scale scores were taken into account (De Leon 1983). Another study found that age explained 11 percent of the variance in retention when external pressure, program, and treatment variables were included as predictors (Condelli 1989). Overall, these findings indicate that research needs to focus more on dynamic client, external pressure, program, and treatment predictors, as well as on fixed client predictors, if it is to be more useful for understanding and improving client retention.

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Adolescents in Therapeutic Communities: Retention and Posttreatment Outcome

Kenneth F. Pompi

INTRODUCTION

This chapter reviews the literature, with the inclusion of some unpublished data, to answer two questions: Are adolescents retained in therapeutic community (TC) treatment? Do TCs produce successful outcomes with adolescents; that is, do they reduce substance use and crime and increase productive behavior?

This chapter reviews nine data sets to:

- Compare treatment retention and outcome for adolescents with that for older clients within the TC modality;
- Compare treatment outcome for adolescents in TCs with adolescents in other drug treatment modalities; and
- Examine the relationship between outcome and time in program (TIP).

The chapter does not compare the retention of adolescents in TCs with the retention of adolescents in other modalities, as the comparison is difficult to interpret.

Who is an adolescent? Standard psychology texts (e.g., Morris 1984; Schiamberg 1985) state that adolescence is the time of transition between childhood and adulthood beginning with puberty at about 11 or 12 years of age. The end of adolescence with the assumption of adulthood is not as well defined: The textbooks distinguish a period of "later adolescence" or "young adulthood" spanning from age 17 or so to the middle or late twenties.

Perhaps more appropriate is the legal definition of juvenile. Some State agencies, such as the Department of Public Welfare in Pennsylvania, do not license facilities where juveniles and adults are mixed. Therefore, emerging all-adolescent programs (such as Abraxas Foundation) pay more attention to the legal definition of juvenile than to the human development theorists who have tried to define the period of adolescence. In Pennsylvania, the legal definition of juvenile is:

. . . anyone under 18 years of age, with two exceptions: (1) those who are past their 18th birthday but remain under the supervision of the juvenile court (which can maintain jurisdiction until the 21st birthday) for an act committed before their 18th birthday; and (2) those under 18 who were arrested for serious crimes and certified as adults (Pompi and Resnick 1987, p. 311).¹

In New York, the definition of juvenile has varied over the past 20 years (De Leon 1984a). Whatever the definition of adolescent or juvenile, however, the present analysis will have to be content with the age ranges defined by the various studies reviewed.

Before presenting the studies, the following question is of interest: Do adolescents currently comprise a robust minority of the TC population; that is, does the topic for this review have any current import?

Table 1 presents data from a survey of the Therapeutic Communities of America (TCA) membership in late 1988 and early 1989. Listed are those TCs that responded to the survey and included population data in their response. The column entitled "Percent Youth" shows the percentage of the total population that was 20 years of age or younger for each TC. As shown by the weighted mean at the bottom of this column, 19.1 percent, or about one in five clients, were youth. As shown at the bottom of the column entitled "Total Youth," youth in all surveyed TCs totaled almost 8,000 clients. Therefore, this review does have current import.

Findings from the nine studies that comprise this review are presented as follows: Study parameters and sample characteristics, retention data, and treatment outcome are summarized in tables 2, 3, and 4, respectively. Only four of the nine studies reviewed followed up clients after discharge and, therefore, permit an analysis of treatment outcome. These studies are presented in table 4.

TABLE 1. *Adolescents in therapeutic communities: Survey of the membership of Therapeutic Communities of America in late 1988/early 1989*

Program	City	State	Total Pop.	% Youth ^a	Total Youth ^b	Mean Age
A-Way Out, Inc.	Long Island City	NY	150	1%	2	21.0
Abraxas Foundation, Inc.	Pittsburgh	PA	350	90%	315	17.5
Amity, Inc.	Tucson	AZ	794	37%	294	22.1
Apple, Inc.	Haupage	NY	728	3%	22	26.8
Behavioral Health Agency	Casa Grande	AZ	3,150	20%	630	30.0
Combined Addicts and Professional Services	San Jose	CA	150	0%	0	31.0
Crash, Inc.	San Diego	CA	320	5%	16	24.7
Creative Health Systems, Inc.	Pottstown	PA	470	3%	14	29.5
Daytop Village, Inc.	New York	NY	2,394	19%	455	25.0
Dynamite Youth Center Foundation, Inc.	Brooklyn	NY	180	65%	117	17.0
Earle E. Morris, Jr., Treatment Center	Columbia	SC	186	25%	47	26.5
Eden House	Minneapolis	MN	280	35%	98	26.0
Free Men, Inc./Tarzana Treatment Center	Tarzana	CA	178	0%	0	29.0
Gateway Foundation, Inc.	Chicago	IL	3,500	15%	525	21.0
Gaudenzia, Inc.	Philadelphia	PA	1,974	2%	39	28.0
Horizon House Rehabilitation Services, Inc.	Philadelphia	PA	132	0%	0	26.0
Hospitality House Therapeutic Community, Inc.	Albany	NY	40	100%	40	19.1
Impact Drug and Alcohol Treatment Center	Pasadena	CA	425	0%	0	28.0
Institute for Human Development	Atlantic City	NJ	2,558	7%	192	27.0
Integrity, Inc.	Newark	NJ	1,000	1%	10	27.0
La Nueva Raza Institute, Inc.	Long Island City	NY	40	68%	27	16.5
Marathon, Inc.	Providence	RI	425	6%	26	26.0
Metamorphosis	Gainesville	FL	18	0%	0	27.0
Newark Renaissance	Newark	NJ	230	30%	69	25.0
Nova Therapeutic Community, Inc.	Omaha	NE	204	50%	102	22.0
Odyssey House, Inc.	Hampton	NH	165	100%	165	16.0
Operation PAR, Inc.	St. Petersburg	FL	870	25%	218	26.0
Phoenix House Foundation, Inc.	New York	NY	1,820	30%	546	26.0
Pottstown Drug and Alcohol Rehab. Program	Pottstown	PA	470	3%	14	29.5
Project Rehab	Grand Rapids	MI	5,276	50%	2,638	22.0
Project Return Foundation, Inc.	New York	NY	1,758	5%	88	30.6
Promesa, Inc.	Bronx	NY	1,310	12%	157	25.0
Samaritan Village, Inc.	Rego Park	NY	1,734	7%	121	28.0
Seadrumar	Seattle	WA	79	10%	8	23.0
Second Genesis	Bethesda	MD	335	15%	50	25.0
Stay' N Out	New York	NY	400	9%	36	29.0
Substance Abuse Services, Inc.	Chicago	IL	3,836	0%	0	30.0
Sunflower House	Santa Cruz	CA	212	29%	61	25.8
The Door of Central Florida, Inc.	Orlando	FL	745	50%	372	21.5
The Renaissance Project, Inc.	New Rochelle	NY	736	4%	29	26.0
Today, Inc.	Newtown	PA	200	100%	200	17.0
Village South, Inc., Partners in Recovery	Miami	FL	760	0%	0	25.0
Walden House, Inc.	San Francisco	CA	482	7%	33	25.0
Westcare	Las Vegas	NV	151	38%	57	24.0
X-Cell, Inc.	Catonsville	MD	236	29%	67	26.4
Total	45 programs		41,451		7,902	
Weighted Mean				19.1%		25.8

NOTE: Programs responding to the survey were not included if population data were missing.
KEY: ^aYouth were defined as clients 20 years of age and younger; ^bTotal population times percentage of youth.
SOURCE: David H. Kerr, Integrity, Inc., Newark, NJ.

TABLE 2. *Study parameters and sample characteristics*

Study	1) DARP	2) PENNSYLVANIA	3) TOPS	4) GATEWAY HOUSES	5) ODYSSEY HOUSE
Reference	Sells & Simpson 1979	Rush 1979	Hubbard et al. 1985	Holland 1978	Sansone 1980
Treatment time period of interest	1969-73	1975-76	1979-81	1968-74	1970-73
TCs studied	34	350 total facilities; TC count not available	14	1	1
Youth age range	19 and younger	19 and younger	19 and younger	18 and younger	21 and younger
Youth percentage of total TC population	~32%		14%	30%	53%
Adults and youth mixed?	Yes	Yes ^a	Yes	Yes	Yes
TC youth study sample	Retention: 1,222; Outcome: 238	961	402	52	332
Youth males	63%	74%	70%		
Youth whites	71%	84%	~80%		
Youth opioid use	47% daily users	12% primary drug	9% primary drug		
Most common pattern of drug use for youth	Opioids	Polydrug, nonopioid	Polydrug, nonopioid		
Youth referred by justice system		44%	40%		

TABLE 2. *Study parameters and sample characteristics (continued)*

Study	6) PHOENIX HOUSE	7) TCA CONSORTIUM	8) ABRAXAS FOUNDATION	9) TWO NEW YORK TCs
Reference	De Leon 1984a	De Leon 1980	Pompi & Resnick 1987	De Leon & Jainchill 1992
Treatment time period of interest	1974	1979	1973-83	1989-90
TCs studied	1	7	1	2
Youth age range	18 and younger	18 and younger	Legally juvenile ^e	TC 1: 18 and younger TC 2: 19-21
Youth percentage of total TC population	21%	21%	69%	TC 1: 100% TC 2: ~20%
Adults and youth mixed?	Yes	Yes	Yes	TC 1: No TC 2: Yes
TC youth study sample	84	229	1,012	TC 1: 70 TC 2: 68
Youth males	~64% ^b	~73% ^b	78% ^d	TC 1: 73% TC 2: 87%
Youth whites	~23% ^b		88% ^d	TC 1: 67% TC 2: 9%
Youth opioid use	~25% primary drug ^b		Low incidence ^e	TC 1: 3% primary heroin use TC 2: 9% primary heroin use
Most common pattern of drug use for youth	Polydrug ^b		Polydrug, nonopioid ^e	TC 1: cocaine or crack use TC 2: crack use
Youth referred by justice system	~45%		~97%	TC 1: ~55% ^b TC 2: Not available

NOTE: In this and subsequent tables, the character ~ indicates an approximate or estimated value, and a blank entry indicates that data were not available or the item was beyond the scope of the study.

KEY: ^a Not available in the reference; from the author's knowledge of Pennsylvania programs in the mid-1970s; ^b Not available in the reference; personal communication from Nancy Jainchill, Center for Therapeutic Community Research, New York, NY, 1991; ^c This classification resulted in a population approximately 18 years of age and younger; ^d Not available in the reference; from program data system; and ^e Not available in the reference; from the author's experience with the client population.

TABLE 3. Retention

Study	1) DARP	2) PENNSYLVANIA	3) TOPS	4) GATEWAY HOUSES	5) ODYSSEY HOUSE
Time in program (TIP) for youth (median days)	96	35	77 ^a		-82
Youth leaving within 1 month	26%		-33%		-32%
Youth completing treatment	15%		10% ^a	15%	
Youth vs. adults	Slightly longer median TIP for youth; equivalent completion rates		Equivalent median TIP and completion rates ^a	TIP not available; slightly higher completion rate for adults	Longer median TIP for adults; completion rates not available

TABLE 3. Retention (continued)

Study	6) PHOENIX HOUSE	7) TCA CONSORTIUM	8) ABRAXAS FOUNDATION	9) TWO NEW YORK TCs
Time in program (TIP) for youth (median days)		~60	181	
Youth leaving within 1 month		~37%	13%	TC 1: 27% TC 2: 18%
Youth completing treatment	~17%		18% ^b	
Youth vs. adults	TIP not available; higher completion rate for youth	Longer median TIP for youth; completion rates not available	Much longer median TIP and much higher completion rate for adults ^c	

NOTE: The presence or absence of statistical significance has not been indicated in tables 3 and 4, as statistical tests were not uniformly available over the range of studies.

KEY: ^a Not available in the reference; personal communication from Robert Hubbard, Research Triangle Institute, Research Triangle Park, NC, 1991; ^b Not available in the reference; from program data system; and ^c Completion rates not available in the reference; from program data system.

TABLE 4. Outcome: Pretreatment to posttreatment change

Study	DARP	TOPS	GATEWAY HOUSES	PHOENIX HOUSE
Followup interval	4-6 years after admission	1 year after discharge	1 year after discharge	2 years after discharge
Pretreatment/posttreatment assessment window	2 months for both	1 year for both	1 year for both	Pretreatment: 1 year/ Posttreatment: 2 years
Youth substance use:				
Opioid	Decrease	N/A ^c		Composite success index that included these drug classes showed decrease
Nonopioid	Decrease	Decrease		
Marijuana	Slight increase	Decrease		
Alcohol	Little change	Decrease		
Youth employment	Increase	Increase		
Youth criminality	Decrease	Decrease	Decrease	Composite success index that included criminality indicators showed decrease
Youth vs. adults	~No difference ^a		Adult outcome better	No difference
TCs vs. other modalities for youth	TC outcomes better overall than MM and DF ^b	TC outcomes better than DF		
Youth outcome correlated with TIP?	~Yes ^a	Yes	Yes	Yes ^d

NOTE: The Pennsylvania Uniform Data Collection System does not collect followup data; therefore, no outcome data are presented for the Pennsylvania study. Outcome data also are not presented for Odyssey House, the TCA Consortium, Abraxas Foundation, and the two New York TCs, as the cited studies did not include followup.

KEY: ^a Not available in the reference; personal communication from Dwayne Simpson, Institute of Behavioral Research, Texas Christian University, Fort Worth, TX, 1991; ^b Derived by (unweighted) averaging of pretreatment to posttreatment changes in the nine DARP criterion measures for TC, methadone maintenance (MM), and outpatient drug-free (DF) modalities; ^c There was little pretreatment opioid use; and ^d Not available in the reference; personal communication from George De Leon, Center for Therapeutic Community Research, New York, NY, 1991.

DARP

The Drug Abuse Reporting Program (DARP) of the Institute of Behavioral Research at Texas Christian University was the first comprehensive multimodality study of the drug abuse treatment industry. This massive study was funded initially by the National Institute of Mental Health (NIMH) and subsequently by the National Institute on Drug Abuse (NIDA). In a chapter in *Youth Drug Abuse*, Sells and Simpson (1979) presented a subset of the DARP data set for young clients. Because DARP distinguished TCs from other modalities, the youth sample for those treated in TCs can be examined.

The first column of table 2 refers to DARP. The DARP study evaluated treatment programs in the late 1960s and early 1970s and involved 34 TCs. "Adolescents" or "youth" (these terms are used interchangeably in this review) were defined for the study as those clients aged 19 and younger. Approximately 32 percent, or about one-third, of the TC population, were in this age range. The youth and adults were mixed in the TCs; in fact, in only one of the data sets of this review were the adolescents treated separately from the adults. As the DARP authors point out:

The DARP treatments were not particularly oriented to youth as a target population, but treated them along with older drug users in the various programs (Sells and Simpson 1979, p. 609).²

The TC youth sample for the retention analysis was large (1,222 clients), but it was reduced to 238 clients for the outcome analysis. The TC youth were 63 percent male and 71 percent white. The youth were primarily opioid users. Referral data were not available independently for youth in the DARP study; therefore, the percentage of youth who were referred by the justice system is unknown.

Retention

The first column of table 3 applies to the DARP TC youth sample. The median TIP for youth in TCs was found to be 96 days; a total of 26 percent, or about one-quarter of TC youth, dropped out of treatment within the first month; only 15 percent of TC youth completed treatment. The median TIP and completion percentage were used to compare youth and adult retention; appreciable differences were not found. Therefore,

the early TCs make TCs' difficulties in holding on to their clients extended to their youth populations as well.

Outcome

The outcome for the DARP TC youth sample is presented in the first column of table 4. The time period between admission to treatment and the followup interview was 4 to 6 years. What is termed the "pretreatment/posttreatment assessment window" in the table (the time periods during which behavior was assessed) was 2 months before admission and 2 months before the followup interview.

Outcome measures for this review are divided into three categories: substance use, employment, and criminality. For substance use, four classes are distinguished: opioid, nonopioid (cocaine, sedatives, stimulants, psychedelics, and other illegal drugs), marijuana, and alcohol. As indicated in table 4, there was a pretreatment to posttreatment decrease in opioid and nonopioid use by the DARP TC youth. Marijuana, however, showed a slight *increase* in use; alcohol use showed little change. There was a pretreatment to posttreatment increase in measures of employment (for DARP, defined as actual employment and related activities), and a decrease in measures of criminality (defined as arrests and support from illegal sources).

Summarizing the DARP outcomes for TC youth, a phrase that the authors used in another context applies: The outcomes were "favorable, if not impressive" (Sells and Simpson 1979, p. 610). The data presented in the study do not permit a reliable comparison of how TC youth fared in comparison with adults on outcome; an unpublished comparison demonstrated no significant differences between these groups (Simpson, personal communication, 1991).

A conclusion can be drawn from Sells and Simpson (1979) in regard to the treatment of adolescents in TCs versus other treatment modalities. For each modality, the author averaged pretreatment to posttreatment improvements in the nine DARP criteria measures presented. The average for TCs was better than the averages for methadone maintenance programs, outpatient drug-free programs, detoxification, and an untreated control group that went through intake but did not return for treatment.

A positive correlation between posttreatment outcome and TIP was found for the youth sample (Simpson, personal communication, 1991). This

relationship, or TIP effect, strengthens the inference that treatment caused the positive changes. Furthermore, as TC youth were found to do better overall than youth in other modalities, the conclusion that the TCs were responsible for the pretreatment to posttreatment improvement has further support and merit.

Summary

- Retention rates for DARP TC youth were similar to those for adults.
- Positive outcomes were found for drug use other than marijuana and alcohol; positive outcomes also were found for employment and criminal involvement.
- Averaging the outcomes revealed that TCs did better with adolescents than other treatment approaches.
- A TIP effect was found for TC youth in DARP.

The DARP study provides an excellent introduction to methodology and baseline retention and outcome results for the analysis of subsequent data sets.

PENNSYLVANIA

The single State authority for drug treatment programs in Pennsylvania established the Uniform Data Collection System in the early 1970s to monitor and evaluate drug and alcohol treatment. Rush (1979) used this large data set to explore the treatment of adolescents. The era studied by Rush was the mid-1970s (table 2, second column); the actual number of TCs contributing data to the study was unavailable in the reference. For the study, Rush distinguished clients 17 and younger from those 18 to 19 years of age; both groups of clients were used as the youth sample for the present review (sample size = 961).

Comparing the first and second columns of table 2, the main contrast with the DARP sample is that the Pennsylvania youth were not primarily opioid users; by this time (the mid-1970s), the familiar pattern of polydrug, nonopioid use associated with adolescents had appeared. A large percentage (44 percent) of the youth were referred by the justice system (i.e., under some form of legal pressure to be in treatment).

Retention

The median TIP was 35 days for TC youth in the Pennsylvania sample (table 3, second column), which was much shorter than the DARP figure of 96 days. There is no ready explanation for this difference. The other retention indicators were not available in the reference.

The Pennsylvania reporting system obtained outcome criteria at discharge, but followup data were not obtained. Therefore, outcome data from the Pennsylvania study are not included in this review.

Summary

- Adolescents in TCs in the mid-1970s, at least in Pennsylvania, were primarily polydrug, nonopioid abusers.
- The justice system was a primary referral source for Pennsylvania TCs serving adolescents.
- Retention in treatment was very low for the adolescents in the Pennsylvania sample.

TOPS

The NIDA-funded Treatment Outcome Prospective Study (TOPS) (Hubbard et al. 1989) of the Research Triangle Institute in North Carolina is the next often-cited outcome study following DARP. In a NIDA monograph entitled *Treatment Services for Adolescent Substance Abusers*, Hubbard and colleagues (1985) reported on a youth sample of clients from the TOPS database. TOPS distinguished between residential and outpatient drug-free programs; the residential programs were almost all TCs. The treatment era studied was about one decade after the DARP era (table 2, third column); 14 TCs contributed data to the study. Comparing the first three columns of table 2, the TOPS sample (sample size = 402) parallels that of DARP and the Pennsylvania study with these exceptions:

- The percentage of the total TC population comprised of youth was only 14 percent for TOPS as compared with 32 percent for DARP.

- Unlike the DARP sample of about 10 years earlier, but like the Pennsylvania sample of about 5 years earlier, pretreatment drug use was primarily polydrug and nonopioid.

The TOPS authors discuss the first exception as follows:

... the programs in the TOPS sample seem somewhat less oriented toward youth than drug treatment programs generally. It should be noted, however, that TOPS specifically excluded school-based programs and did not include any programs designed principally for youth (Hubbard et al. 1985, p. 50).

The 40-percent justice system referral base for TOPS parallels that of the Pennsylvania data set.

Retention

The first-month dropout rate was available in the reference, and other retention data were provided by Hubbard (personal communication, 1991). Median TIP for the TC youth was 77 days (table 3, third column); about one-third of the youth dropped out by the first month, and 1 out of 10 completed treatment. The youth and adult groups were found to exhibit equivalent retention. These results roughly parallel the DARP results presented earlier.

Outcome

The interval between the treatment and followup interview for TOPS was 1 year after discharge (table 4, second column), which was considerably shorter than for DARP. The TOPS results parallel DARP for nonopioid use, which showed a pretreatment to posttreatment decrease; unlike DARP, marijuana and alcohol use also showed decreases. For the TOPS adolescents, unlike the DARP adolescents, opioid use was minimal, so outcome data for this drug class were not presented. Like DARP, youth employment and criminality showed positive outcomes.

The TOPS data did not permit a reliable comparison of youth versus adult outcomes. Like DARP, TC outcomes were somewhat better than outpatient drug-free programs; as opioid use was low, there were few adolescents in methadone maintenance programs for a comparison with that modality. Like DARP, outcomes were positively correlated with TIP.

Summary

- The TOPS retention data for TC youth were similar to those of DARP.
- TOPS youth and adults exhibited equivalent retention.
- Positive outcomes were found for three drug classes, employment, and criminal involvement.
- TCs did better than outpatient drug-free programs with adolescents.
- A TIP effect was found for TC youth in TOPS.

However, the TOPS authors expressed the following cautions for the TC adolescents: (1) One in four older youth reported posttreatment daily marijuana use regardless of time in treatment, and (2) for those youth who stayed in treatment 3 months or more, one in four reported posttreatment heavy alcohol use.

Therefore, the authors concluded:

The results of available studies on drug treatment for youth, however, are only moderately encouraging. Even though intervention occurs early in the drug use career, many young clients continue to abuse both alcohol and marijuana (Hubbard et al. 1985, p. 63).

GATEWAY HOUSES

Having discussed three multimodality data sets developed by investigators not affiliated with individual drug treatment programs, studies of TC-based researchers now are addressed. These studies are presented in roughly chronological order by treatment era. The most appropriate reference for this review of the work of Holland with the Gateway Houses program is her paper on the effectiveness of treatment on criminal behavior (Holland 1978; see also Holland 1984 for a comparison of drug use patterns and other problems of adolescents and adults admitted to Gateway Houses).

Holland (1978) studied the Gateway Houses treatment program in the late 1960s and early 1970s (table 2, fourth column), the same era as DARP. Unlike the references cited for DARP, the Pennsylvania study, and TOPS, Holland's study did not focus on adolescents. However, since the data were presented for a distribution of age ranges, it was possible to discern retention and outcome data independently for a youth group. The youth group defined for this review had age 18 as an upper limit, 1 year lower than that of DARP, the Pennsylvania study, and TOPS. The percentage of youth in the total TC population was close to that of the DARP study; like the DARP, Pennsylvania, and TOPS studies, the youth were mixed with the adults in the TC milieu. In contrast, however, the youth sample available for analysis was small (sample size = 52). The data presentation did not permit a determination of demographics or referral circumstances independently for the youth. Because the study focused on criminal behavior, information on drug use was not available in the reference.

Retention

The only retention statistic available in the reference was the completion rate (table 3, fourth column). As with DARP and TOPS, the completion rate for Gateway Houses youth was low. The completion rates for adults and youth were similar (18 percent versus 15 percent, respectively), paralleling the results of DARP and TOPS.

Outcome

The followup and assessment time periods parallel TOPS (table 4, third column). Because the study evaluated only criminal behavior, substance use and employment data were unavailable. Youth criminality, as indicated by arrest rate, decreased from a pretreatment baseline mean of .65 arrests to a posttreatment mean of .37 arrests at followup, but this decrease was not significant.

In contrast, pretreatment to posttreatment decreases in mean arrests for two groups of adults were significant: .67 to .25 arrests for those aged 19 to 25, and 1.08 to .56 arrests for those aged 26 and older. Because this was a study of a single TC, no comparison was possible with other treatment modalities. Like DARP and TOPS, a TIP effect for the youth group was found in the Gateway Houses study. In particular, the fraction of the youth group who stayed in treatment 9 months or more showed a substantial decrease in arrest rate.

Summary

- There was no appreciable difference in retention between Gateway Houses youth and adults, which was similar to the results of DARP and TOPS.
- Youth did not profit as much as adults from the Gateway Houses treatment experience in the reduction of criminality.
- A TIP effect for arrest rate was found for the Gateway Houses youth.

ODYSSEY HOUSE

Sansone (1980) published the first retention study of the TC using the "life table" technique, whereby survival in treatment is depicted over points in time after admission. Sansone studied Odyssey House clients; although the study did not focus on adolescents, the population was divided into age ranges, permitting the independent analysis of retention for a youth group.

The Odyssey House sample included admissions during the early 1970s (table 2, fifth column). Sansone's report distinguished three age groups, but no group was equivalent to the age range of 19 and younger established by the DARP study. Clients 21 and under were chosen to be the youth group of interest for this review (sample size = 332). The population at Odyssey House at that time was mixed for adults and youth. The data presentation did not permit a determination of demographics and referral circumstances independently for the youth group, and there was no description of pretreatment drug use.

Retention

The median TIP of approximately 82 days and first-month dropout rate of approximately 32 percent (table 3, fifth column) were reasonably close to the respective figures for DARP and TOPS. The completion percentage was unavailable in the report. The youth were not retained in treatment as well as the adults, who had a median TIP of 105 days; this last result is discrepant from DARP and TOPS.

Summary

- The Odyssey House study replicated the adolescent retention indicators of DARP and TOPS.
- Retention for adults was appreciably better than for youth, which did not replicate DARP and TOPS.

PHOENIX HOUSE

De Leon has assembled the definitive data set for an individual TC, specifically, Phoenix House. This effort was funded by NIDA. In a paper that was secondary (De Leon 1984*a*) to the main presentation of Phoenix House outcome data (De Leon 1984*b*), findings on the relationship between age and outcome were reported. The treatment time period studied was 1974 (table 2, sixth column). The youngest age group was defined as 18 years of age and younger. The youth in this age range were 21 percent of the total Phoenix House population, and they were treated in the same milieu as the adults. The number of youth contributing to the analysis was low (sample size = 84).

Demographics and pretreatment drug use for the youth group were made available (Jainchill, personal communication, 1991). As seen in the table, there was a much lower proportion of whites in the youth group than in DARP, the Pennsylvania study, and TOPS. The use of opioids was not as high as that reported for DARP, but it was higher than that reported for the Pennsylvania study and TOPS. This may reflect the treatment era studied, which falls between that of DARP and the other two studies. Note that, in parallel with the Pennsylvania study and TOPS, nearly half of the Phoenix House youth were referred by the justice system.

Retention

The only retention indicator that could be derived from the report was the completion percentage (table 3, sixth column). A total of 17 percent of the youth group completed treatment, which was higher than the completion percentage of 11 percent for the adult clients.

Outcome

Table 4 (last column) shows that the followup interval for the Phoenix House study was 2 years after discharge, and the pretreatment and posttreatment assessment time periods differed at 1 year and 2 years, respectively. De Leon applied a "success index" to the age groups, which was a four-point scale that integrated drug and criminal indicators. Employment was excluded from the scale, as it was highly correlated with the drug and criminal indices and added no new information.

The success index showed a pretreatment to posttreatment improvement for adolescent clients that did not differ significantly from that of older clients. However, the author noted that adolescent dropouts with justice system involvement had the poorest outcomes. There was a correlation between outcome and TIP for adolescent completers and dropouts combined; this correlation, however, was not found for adolescent dropouts alone (De Leon, personal communication, 1991).

Summary

- For Phoenix House, youth showed higher retention in treatment than adults.
- The youth showed overall improvement in treatment, but legally referred dropouts continued "to use drugs and commit crime regardless of their . . . length of stay in treatment" (De Leon 1984a, p. 26).
- Nevertheless, the overall conclusion of the Phoenix House study was that "adolescent outcomes are not unlike those of adults" (De Leon 1984a, p. 28).
- A TIP effect was found for the Phoenix House youth group overall, but not for dropouts alone.

TCA CONSORTIUM

De Leon (1980) also directed a NIDA-sponsored project to develop research capability in seven TCA member programs (see also De Leon and Schwartz 1984). The project report presented retention data, including that for a youth group, for the consortium of seven TCs. The

treatment time period studied was 1979 (table 2, seventh column). As with the Gateway Houses and Phoenix House data sets, the youth group was defined as 18 years of age and younger. This group comprised 21 percent (sample size = 229) of the total TC population and was treated together with adults. Gender data were available for the youth group (Jainchill, personal communication, 1991).

Retention

For the combined youth groups of the seven TCs, the median TIP was about 60 days, and the percentage who dropped out during the first month was about 37 percent (table 3, seventh column). The 60-day median TIP was lower than all but one reported in this review, and the first-month dropout rate was the highest reported.

Although the TCA youth exhibited relatively low retention in treatment, youth retention was still better than that of the total population, which exhibited a median TIP of 45 days. In fact, the retention difference between youth and adults was even more extreme, as the total population data included the adolescents.

Summary

- Retention in treatment for the TCA consortium adolescents was low relative to the field.
- Nevertheless, adolescents had higher retention rates than adults.

ABRAXAS FOUNDATION

The Abraxas Foundation has contributed its report (Pompi and Resnick 1987) to the series of retention studies that have depicted survival in treatment over points in time after admission. The treatment era spanned by the study was exceptionally long, more than 10 years (table 2, eighth column). One comparison in the report divided the population into legally juvenile and adult groups; the juvenile group was approximately 18 years of age and younger and comprised 69 percent of the total population. (The Abraxas Foundation has since become 100-percent juvenile.) The number of clients in the juvenile group was very robust, over 1,000, and the drug usage of this group was known to be primarily polydrug and nonopioid. In contrast to preceding studies reporting

referral sources, the Abraxas Foundation's population was almost totally referred by the justice system.

Retention

The juvenile group exhibited dramatically high retention relative to that of the other reported studies for two of three indicators (table 3, eighth column). The juveniles spent 181 median days in treatment, and only 13 percent left within the first month; however, only 18 percent of them completed treatment.

The retention rates for the adults were even better. The median TIP for the adults was well beyond the 300-day cutoff for the study, and 42 percent of the adults completed treatment. The argument was made in the study that court pressure was responsible for the high retention of Abraxas Foundation clients relative to other TCs and, furthermore, that:

... court-referred adults may remain in treatment longer than court-referred juveniles because they feel more pressure to complete treatment from the criminal justice system than juveniles do from the juvenile justice system (Pompi and Resnick 1987, p. 322).³

Another factor in the program's high retention may be that it is located in a rural area; therefore, the clients have limited access to public transportation to abscond (Jainchill, personal communication, 1993). The longer median TIP for adults found in the Abraxas Foundation study parallels that of only one other study in this review, Odyssey House.

Summary

- The almost totally court-referred Abraxas Foundation juveniles exhibited dramatically high retention relative to the field on two of three indicators.
- Retention for adults was dramatically higher than retention for youth.

TWO NEW YORK TCs

The final data set to be discussed is from a recently completed study of adolescents admitted to two New York City TCs (De Leon and Jainchill

1992). As shown in table 2 (ninth column), one of the TCs, TC 1, is the only program in this review that treated adolescents exclusively. For TC 1, the age range for the population was 18 and younger; for TC 2, the age range for the youth group was defined as 19 to 21.

The number of youth in each TC available for analysis was small (sample sizes = 70 and 68). The TCs differed dramatically in the percentage of whites in the population. Both TCs differed from preceding data sets in that the majority of clients were involved primarily with cocaine and "crack," reflecting the prevalence of those drugs during the time period of the study. TC 1 had over half of its population referred by the justice system.

Retention

The only retention statistic available was the first-month dropout rate, which was 27 percent and 18 percent for TC 1 and TC 2, respectively (table 3, ninth column). These statistics fall within the range established by previous data sets.

Summary

- Youth recently admitted to two New York TCs were heavily involved with cocaine and crack.
- Dropout rates for the youth were not exceptional.

TWO MORE STUDIES

Before proceeding to the conclusions of this review, two other studies are considered. The first is distinguished by virtue of its being the first published study that focused exclusively on adolescents in a TC. Biase (1971) found that the depression score of the Multiple Affect Adjective Check List (MAACL) predicted which adolescents (mean age = 16) at Phoenix House dropped out of treatment during the 6 months after testing. The dropouts had registered significantly higher MAACL depression scores than those who remained in treatment. In contrast, no significant differences were found between the two groups on MAACL anxiety or hostility scores.

The second study was recent and represents a rarity—a process study that focused on a treatment factor thought to be essential to the successful retention and treatment of adolescents. Weidman (1987) capitalized on what he called a "naturally occurring experiment" to explore the effects of family therapy and staff training on the retention of TC adolescents. In the nomenclature of Campbell and Stanley (1966), the study approximated a "nonequivalent control group" design whereby an experimental group is given an intervention while a control group is not. Both groups are given pretreatment and posttreatment testing, and the two groups are "naturally assembled collectives." One of the facilities of a suburban District of Columbia TC changed its treatment philosophy to include structural family therapy (Minuchin and Fishman 1981), while another facility did not. Both facilities were said to be otherwise identical in treatment approach and philosophy. Weidman looked retrospectively at adolescent retention for both facilities for a time period of 9 months before the introduction of structural family therapy to the experimental facility and for a time period of 9 months after that point.

The new family therapy approach involved " . . .viewing the facility as a large family, using structural concepts in group work, and having the family therapists use the structural approach in their work with families" (Weidman 1987, p. 24).⁴ Furthermore, the staff of the experimental facility were involved in a weekly training program in structural family therapy.

A total of 43 adolescents at the experimental facility and 49 adolescents at the control facility were followed; the subjects ranged from 14 to 20 years of age. The primary finding was that, as expected, the number of adolescent dropouts showed a significant decrease during the 9 months following the introduction of family therapy at the experimental facility, but not at the control facility. Bolstering this initial finding was the secondary finding that in the experimental facility, families of the dropouts attended family therapy at a significantly lower rate than families of the clients who remained in treatment. These data support the hypothesis that family involvement in the treatment of adolescents is a potent factor in their retention in the TC.

CONCLUSIONS

Retention

Of the nine studies presented in this review, the retention statistic of median TIP was available for six studies and ranged between 35 and 181 days for TC adolescents; the four middle scores were clustered between 2 to just over 3 months. Seven studies permitted the comparison of youth with adults in median TIP, completion rate, or both; of these:

- Two showed an appreciable retention advantage for youth.
- Three showed little retention difference between youth and adults.
- Two showed an appreciable retention advantage for adults.

Thus, the results of the comparisons vary. However, only two studies showed an appreciable disadvantage for youth. One of these was the Abraxas Foundation study (Pompi and Resnick 1987), where median TIP for youth at 181 days was by far the highest reported in this review, albeit lower than that for adults.

The first question posed at the beginning of this review was: Are adolescents retained in TC treatment? The results presented above lead to this answer: Adolescents generally are retained in TCs about as well as adults. It appears that conclusions drawn about the ability of TCs to retain the general population of clients also apply to the special population of adolescents. However, there are inconsistencies in the data, and more work needs to be done.

Outcome

Of the nine studies reviewed, four reported on posttreatment outcomes. Of these four, three presented outcome data on substance use. All three studies showed an overall decrease in substance use by adolescents after TC treatment in comparison with pretreatment use, with this exception: One study showed a slight increase in marijuana use and little change in alcohol use.

Two of the four studies reported employment as an outcome indicator; both showed an increase in employment after treatment. All of the four studies reported indicators of criminality; all four showed a decrease in

criminal involvement after treatment. Of the four outcome studies, three permitted a comparison of youth with adults. Two of these studies showed no difference between youth and adult outcomes, but one study showed an advantage for adults.

Two of the studies permitted a comparison of TC and outpatient drug-free modalities in regard to youth outcomes; both showed an advantage for TCs.

Finally, all four of the outcome studies showed a positive relationship between outcomes and TIP (that is, a TIP effect for TC-treated adolescents). In the absence of an experimentally defined control group, the presence of such a relationship strengthens the inference that TC treatment caused the positive changes in the youth sample and reduces the credibility of alternative explanations for the changes, such as "regression" or "maturation."

The second question posed at the beginning of this review was: Do TCs produce successful outcomes with adolescents; that is, do they reduce substance use and crime and increase productive behavior? The evidence leads to this answer: The conclusions drawn from outcome studies of TCs in general (that TCs are effective in reducing drug use and crime and increasing productive behavior) appear to apply to the special population of adolescents. However, data on adolescents remain scarce.

DISCUSSION

The issue of posttreatment marijuana and underage alcohol use remains problematic. DARP did not show a positive impact by TCs on the adolescent use of marijuana and alcohol; although TOPS did show decreases for both substances by adolescents, the impact was disappointing. It appears that earlier TCs did not focus on adolescents' use of alcohol and marijuana. Is total abstinence from all substances the treatment goal for TCs working with adolescents today? Do "recreational" marijuana use and underage drinking predispose adolescents to relapse in other drug classes?

As seen in this review, adolescents tend to be referred in significant numbers by the justice system. Court pressure, therefore, is an important variable that demands further investigation. The Abraxas Foundation study (Pompi and Resnick 1987) attributed its finding of high retention to

the impact of court pressure. An early paper by Lissner and colleagues (1976) declared that for TCs accepting court-referred clients, the clinical program must work with the judges and probation officers and develop a partnership to keep the clients in treatment. Therefore, the *relationship* between the program and the court is key. Furthermore, so-called voluntary clients enter treatment under external pressure—from family, friends, schools, and others interested in their welfare. Court pressure may be one of a spectrum of external motivators to bring clients into treatment (Heit and Pompi 1977), albeit the one that may be most evident. These factors have yet to be clarified for adolescent clients.

It has been the author's experience with the Abraxas Foundation population that most court-referred adolescents are oppositional, in denial of their problems, and not motivated for treatment at admission. Many of these clients appear to become motivated, looking more like voluntary clients, as a result of their initial months in the TC milieu. This within-treatment phenomenon needs to be explored.

The importance of court pressure may apply to treatment outcomes as well as to treatment retention; this issue is in need of data. If court pressure lengthens the stay of adolescents in TC treatment by reducing dropout, do the clients thereby profit more from treatment? Alternatively, do they just mark time, not buying into the treatment process, until the court stipulation runs its course?

Delinquency and conduct disorder also must be addressed in adolescents. For instance, the Abraxas Foundation is receiving an increasing number of referrals whose primary presenting problem is delinquency, particularly drug selling, with little concomitant drug use. Do these clients belong in the TC?

There are data indicating that psychological factors play a role in the treatment retention of juveniles. For instance, Biase (1971) showed that depression scores predict eventual dropout. It is thought that adolescents may be more generally distressed than adults entering TCs. The TOPS authors stated:

Most youth entering drug treatment programs have a complex array of drug abuse, alcohol use, delinquency, and mental health problems. . . . In addition to substance abuse and problems

attributed directly to youth, about one-half the youth report suicidal thoughts or attempts in the year prior to entering treatment (Hubbard et al. 1985, p. 64).

Therefore, flags for mental health problems that may result in early dropout, such as the MAACL, need to be further elucidated.

Education and vocational preparation are critical for adolescents in general; this appears even more true for adolescents in TCs. The influence of education and job success on posttreatment relapse in adolescents should be researched.

Weidman's study (1987) demonstrated that involving the families of adolescents in therapy positively impacts treatment retention. This interesting and reasonably well-controlled study should be followed up with more such studies of the role of the family in treatment and in reentry, aftercare, and relapse prevention.

The question of mixing adults and adolescents in the TC treatment milieu is an issue that has not only clinical significance but economic and political significance. There are obvious advantages to treating both groups in the same facility. It is more expensive to segregate than to integrate special populations from an economy and bed utilization perspective. Adolescent clients do not perform as surrogate staff as well as older clients, and mixing assists the economy of staffing for the adolescent group. There also are disadvantages. For example, the older clients may "turn on" and "turn out" the younger clients in regard to heavier drug use and more serious criminal activity. The general public and licensing agencies also may frown on such mixing. In facilities that also mix the sexes, these concerns may be even more acute. The question of treatment segregation versus integration of adolescent clients has not been addressed in TC-based studies.

How have traditional TC programs and practices changed to meet the needs of adolescents (and the requirements of their funding sources and licensing agencies)? Has the atmosphere of confrontation been softened? Are adolescent clients used as staff surrogates? Is group therapy being deemphasized in favor of more individual therapy? Have program components, accountability, paperwork, external reporting requirements, general overhead, and thus the expense of treatment increased? Do licensing agencies with their regulations, such as the proscribing of menial labor, dilute the TC milieu for adolescents? Is planned duration of

stay in the TC different for adolescents and adults; if so, is this a clinical or a funding consideration? Can adolescent programs mix the sexes as comfortably as adult programs? Are there data to track these issues and to justify whatever changes have been made in TC practices over the years to accommodate the adolescent client?

Deitch and Zweben (1976) discussed such issues in a clinical paper that provided early and prescient recommendations for making "contemporary treatment more responsive to the needs of adolescents." De Leon and Deitch (1985) provided further discussion of the adolescent in the TC. Beschner and Friedman (1985) reviewed the correlates and associated problems of adolescent drug abusers and their various treatment settings. A NIDA research monograph edited by Rahdert and Grabowski (1988) critically reviewed adolescent assessment and treatment process; these assembled reports can be read with the TC milieu in mind. Owen and Winters (1991) provided an updated review of adolescent treatment outcome studies and significant treatment issues with recommendations for future research.

RESEARCH RECOMMENDATIONS

Two major studies on adolescents are being funded by NIDA in the 1990s. The Drug Abuse Treatment Outcome Study (DATOS), which includes the study of adolescents as well as adults, is the third in a series of large-scale multimodality outcome studies following DARP and TOPS. The other study involves the evaluation of adolescents admitted to six TCs (Jainchill and Bhattacharya, in press). These two studies should eventually answer critical questions about the current retention and posttreatment outcome of adolescents in TCs. These major studies may preempt the funding of followup studies for individual programs, particularly if they are based on quasi-experimental research designs. Hence, it may be politic for TC-based researchers to focus on the following:

- Outcome studies that are true experiments; the uniqueness and power of this approach should attract funding.
- Process studies that explore the elements of treatment, including those that enhance retention; as such studies are few, a broad range of methodologies should attract funding.

In regard to treatment outcomes, researchers in the past have looked for a correlation between posttreatment success and TIP as evidence of treatment impact. The following issues are notable in trying to use this strategy for court-referred adolescent clients:

- The juvenile courts increasingly are stipulating a maximum duration of stay for drug treatment. Due to funding constraints, the maximum time is getting shorter. Whatever the achievements of the client during the stipulated time period, he or she is to be discharged by the program at the period's conclusion. This may result in an insufficient range of treatment durations for a robust correlation between TIP and outcome to appear.
- The courts may stipulate the more dysfunctional and recalcitrant client to a longer duration of stay than usual, which works against the TIP effect.
- As discussed in the section on Abraxas Foundation client retention, court pressure may reduce dropout significantly; hence, court-referred clients may not show the self-selection artifact that contributes to the TIP effect as much as clients who are not in the justice system.

Therefore, for court-referred clients, it may be difficult to tease out a true dose-response relationship in a TIP analysis and impossible to compare the result with that found for voluntary clients. A stronger study design is needed to support the conclusion that TC treatment causes the posttreatment improvement in this population. Would the juvenile courts accept an experiment with random assignment to TC treatment versus a nontreatment alternative or, if that proves too uncomfortable, to short-term versus long-term TC treatment? One advantage of using stipulated clients is that court pressure reduces the tendency for attrition in the group assignments.

In regard to treatment process, an important initial step would be to determine the current state of affairs in the treatment of adolescents in TCs. Another survey of the membership of TCA should be undertaken, and questions pertaining to adolescents should be included. These programs would be asked what they are doing in regard to this special population and why they are doing it. Some obvious areas of inquiry are:

- Referral circumstances;
- Relationship of the program to referral sources, particularly the courts;
- Problem domains presented by adolescents (e.g., mental health co-morbidities, delinquency, dysfunctional family systems, and school difficulties);
- Cocaine and crack involvement;
- Initial motivation and problem denial;
- Planned duration of stay;
- Treatment retention;
- Program philosophy toward marijuana and alcohol use;
- Mixing versus segregation of adolescents and adults;
- Mixing versus segregation of the sexes;
- TC procedures and tools for adolescents;
- Softening of the atmosphere of confrontation;
- Use of adolescents as staff surrogates;
- Use of adolescents for menial labor;
- Individual versus group therapy;
- School and vocational programs;
- Family involvement and therapy;
- AIDS prevention;
- Treating delinquency as well as drug abuse;
- Programs for drug sellers;

- Reentry, aftercare, and relapse prevention strategies;
- Juvenile licensing, oversight, and funding agencies and their influence; and
- Accountability, paperwork, external reporting, general program overhead, and cost.

The answers to these issues would provide a grassroots framework for developing research questions of import for treatment process analyses. Several such treatment process questions have been adduced in this chapter. One that particularly appeals to the author is the hypothesized "flip" shown by oppositional youth when they appear to accept treatment. Many court-referred youth—who begin their stay absolutely opposed to treatment, not believing that they have a problem, and complaining that they have gotten a bad deal from the judge—appear to change for the better early on in the TC milieu. It would be interesting to try to track this phenomenon. Is it a real change in attitude? Can it be predicted at admission? Can the probability of it happening be enhanced? Does it predict treatment retention and posttreatment outcome? A within-treatment study could explore these questions for oppositional adolescents, perhaps using the Circumstance, Motivation, Readiness, and Suitability (CMRS) instrument developed by De Leon and Jainchill (1986).

Finally, researchers should be vigilant to capitalize on program changes and improvements that can be researched; perhaps there are other natural experiments like that of Weidman's study (1987). TC administrators might be encouraged (with administrative support dollars from research grants) to phase in new program elements with *part* of the program population so that a quasi-experiment, at least, is possible. An era of TC-based process studies thus could begin for adolescents. If a process study is successful, it lends indirect credibility to the hypothesis that TCs *cause* their positive posttreatment outcomes; a series of successful process studies investigating a variety of hypotheses would powerfully make this point.

NOTES

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Therapeutic Communities: Substance Abuse Treatment for Women

Sally J. Stevens and Peggy J. Glider

INTRODUCTION

Therapeutic communities (TCs) have established themselves as a treatment modality for many special populations of substance abusers. The foundations or roots of the TC were based in the tradition of the Alcoholics Anonymous 12-step method and first applied to the treatment of male heroin addicts (Rom-Rymer 1981). As the TC movement grew, the methodologies used and services provided were expanded and adapted to meet the special needs of a number of typically underserved populations. Of the groups receiving treatment within the TC, those most often studied included those with criminal justice involvement and those with co-morbidity issues. Other special populations that have received less attention are adolescents, ethnic minorities, the homeless, and women. The focus of this chapter is the special population of women in substance abuse treatment, primarily in TCs.

Specialized programs for women within TCs have been available for over two decades, but women remain an underserved population. Prior to 1970, there were very few attempts made to understand substance abuse among women. The National Institute on Drug Abuse (NIDA) addressed the problem of underservice to women in 1974 by establishing a program for women's concerns. In 1976, a national conference on women's issues was held that focused on identification of treatment needs of women and types of programs that would have a positive impact on the female drug abuser. Public Law 94-371 was passed in 1976, granting priority considerations for the funding of women's treatment and prevention services (Beschner and Thompson 1981). In 1979, a survey was conducted to identify all the substance abuse agencies in the United States that provided specialized treatment services to women; only 44 programs were identified (Beschner and Thompson 1981).

During the middle to late 1980s, an increased interest in substance abuse services for women was beginning to emerge. This interest was the result of several factors. First, the number of women seeking treatment was increasing drastically in many communities. For example, Palley (1991) cited the following statistics: "Only 12 female cocaine users sought treatment in Philadelphia 10 years ago. In 1989, there were more than 3,300. Today, nearly half of the addicts in the city are women . . ." Similar increases are reported for New York City, where the number of women using cocaine during pregnancy has more than quadrupled between 1985 and 1990 (Sofer, unpublished data).

Second, the Omnibus Drug Bill was passed in 1986, increasing funds available for substance abuse research and demonstration programs. One outcome of this was the development of the Office for Substance Abuse Prevention, whose primary focus was high-risk youth. One key risk factor identified was being the child of a substance abuser. This focus increased the interest in substance-abusing women, as they were most often the primary caregiver and the single parent responsible for these children.

In addition, the impact of perinatal substance use on the fetus and future development of the child became a growing concern. Data from 1989 reported by the Los Angeles County Department of Children's Services in Edelstein and colleagues (1990) indicated that referrals for drug-exposed infants increased 500 percent from 1981 to 1987. *The New York Times* quoted Elizabeth Graham, New York City's assistant health commissioner, saying that cocaine abuse among pregnant women had increased 3,000 percent over the last 10 years (Rist 1990). The National Association for Perinatal Addiction Research and Education reported that in a national survey of hospitals, over 16 percent of all newborns tested positive for cocaine in their urine. A 1989 survey conducted by the Select Committee on Children, Youth, and Families found that 15 of the 18 hospitals surveyed had experienced a three- to four-fold increase in drug-exposed births since 1985 (Kronstadt 1991). Similarly, in Philadelphia, 20 percent of all babies born during 1990 had cocaine in their systems (Palley 1991).

As a result of the increasing prevalence of the problem and legislative interest, services to women have increased. However, although women comprise approximately one-third of all addicts nationally, women are eligible for only one-fifth of the available treatment slots calculated across all types of treatment modalities (Palley 1991). Also, little

empirical research from programs for women has been published. This lack of published research makes it difficult to derive an accurate picture of female drug abuse patterns.

Treatment statistics, often unpublished, are a primary source for identifying drug use patterns; however, this source of information has its limitations. Few standardized instruments or data collection procedures are used across multiple programs, making cross-site comparisons difficult. Only a few national studies have been conducted that attempt to collect, compile, and analyze this immense database (e.g., Drug Abuse Reporting Program, Treatment Outcome Prospective Study, Drug Use Forecasting). In addition, treatment statistics only describe those individuals who actually enter treatment, a very small portion of the total number of substance abusers. Regardless of these methodological limitations, a wealth of valuable information is available that describes the characteristics of treatment participants at intake and posttreatment outcomes.

This chapter discusses what is known about substance-abusing women who have enrolled in a TC for substance abuse treatment and provides suggestions for future treatment and research efforts. The topics covered include a profile of women in treatment in terms of demographics and legal, medical, social, economic, and psychological needs.

NATIONAL PROFILE OF WOMEN IN TCs

Demographics

Of the 56 million American women of childbearing age (ages 15 to 44), approximately 15 percent currently are substance abusers (Moyers 1989). Only a small percentage of these women enter any kind of substance abuse treatment. A profile of those women entering TCs follows.

Ethnicity varies widely depending on the geographic location of the TC program. For example, Caton House in Philadelphia reports that 96 percent of their women are African American (Walsh et al. 1991); Operation PAR in Florida is 90 percent African American, 5 percent Hispanic, and 5 percent white (Hughes et al. 1991). At Amity, Inc., in Tucson, AZ, 61 percent are white, 21 percent are Hispanic, 13 percent are African American, 4 percent are Native American, and 1 percent are Asian American (Glider, unpublished data). The age of

women upon entry into a TC for treatment also varies by program. However, most programs provide services to women ages 18 to 35, with the mean age of 27 years (Stevens 1988).

The educational level of women entering TC treatment generally shows a trend for few high school graduates. For example, Caton House (Walsh et al. 1991) reported that more than 60 percent of its clients dropped out of school, 26 percent completed high school or have a General Equivalency Diploma (GED), and 13 percent attended or graduated from college. Similar statistics were reported for Operation PAR (Hughes et al. 1991), with only 10 percent of its clients completing high school or getting a GED and an additional 15 percent completing some post-high-school education.

Legal Issues

Since 1980, the number of women incarcerated has increased 134 percent (Moss 1990), and many of these women are addicts. Often, these women trade sex for drugs or money in their effort to support their drug habit. When women are arrested, they are sentenced to jail or prison for illegal sexual behavior rather than for a drug-related offense; thus, they are not stipulated into drug treatment by the legal system (Silbert et al. 1982). Thirteen percent of women in any type of treatment have been stipulated by the legal system to treatment; however, 39 percent of women reported being arrested within the 2-year period prior to entering treatment (National Institute on Drug Abuse 1979). This discrepancy provides evidence of the legal system's reluctance to intervene in women's drug habits either by jail or treatment (Beschner and Thompson 1981).

Evidence for the legal system's reluctance to stipulate women to treatment is supported by data from TCs. For example, at Amity, years of addiction before being stipulated to treatment ranged from 5.8 years for African-American women without children to 14.1 years for Hispanic women with children. Moreover, courts delay intervention because women have children (Arbiter, unpublished data). Across ethnic groups, women without children are arrested and placed in jail after a shorter drug experience than women with children (table 1).

TABLE 1. *Women in the Amity/Pima County jail project, 1987-1989*
(*n* = 90)

Characteristics	<i>n</i>
Number who are mothers	67
Total number of children from the 67 mothers	164
Average years of addiction	
White women without children	7.1
White women with children	12.5
Hispanic women without children	8.7
Hispanic women with children	14.1
African-American women without children	5.8
African-American women with children	8.2
Number who went on to long-term treatment	33
Total number rearrested	21
Of those rearrested, number who went to prison	8

Medical Issues

Beschner and Thompson (1981) reviewed the literature on the health problems of female substance abusers. The review reveals that women are more likely than men to cite physical problems as the motivating factor for entering treatment. Women suffer from a variety of problems, including infection, anemia, venereal disease, toxemia, hepatitis, hypertension, and diabetes. Some of these problems arise from an unhealthy lifestyle—one with little concern for hygiene, health, or nutrition. These women also are at greater risk for gynecological problems, including malignancies, and have a number of unplanned pregnancies. Due to the increase in crack-cocaine smoking among women, their general health is even more debilitated with an increased incidence of respiratory problems. To get drugs, women often prostitute—putting themselves at risk for sexually transmitted diseases (STDs) (Stevens et al. 1993).

Medical problems are common among women who enter TCs (Stevens, unpublished data). In part, this may be due to the lack of ongoing

preventive health care. Stevens and colleagues (1989) report that many women fail to have Pap smears on a regular basis and, in fact, display ignorance about even basic facts regarding their bodies and reproductive functions. Furthermore, their neglect of nutrition and prenatal care compromises their pregnancies.

At Amity, women report numerous health problems at intake. The most commonly reported health problems include STDs such as chlamydia and gonorrhea, complications from lack of prenatal and postnatal care, complications from lack of care following abortions and other traumas to the female reproductive system, and respiratory system and dental problems. Given that 41 of the 55 women in Amity’s long-term residential TC admitted to histories of prostitution, with the average number of years of prostitution equaling 5, it is not surprising that medical problems specific to the female anatomy are commonplace (table 2).

TABLE 2. *Survey of 25 TCA membership agencies*

TC Characteristics	Number
Number of people being served in all components	11,634
Number of States represented	10
Number of agencies whose populations are more than 50% minority	10
Average breakdown between men and women	70%:30%
Agencies that reported that most people they served were parents	17
Agencies that did not know who were parents or who treated adolescents	8
Agencies that had a program for mothers and children	10
Agencies that had provisions for fathers and children	0
Agencies that have a waiting list to enter	23
Average time a person must wait to enter treatment (months)	4

Social and Economic Issues

In 1986, 16 percent of the Nation's families were headed by women, while 51 percent of the families living in poverty were headed by women (Abramovitz 1988). The social and economic conditions of the women who enter public-supported drug treatment programs are very poor. Exacerbating their poverty, most of these women have children. Beschner and Thompson (1981), in a NIDA monograph on women and drug abuse treatment, reported that 73 percent of the women in the Washington, DC, program were mothers, but they noted that few drug treatment programs provided childcare services.

These women typically come from fragmented family structures that decrease the social support they can call on for childcare while they are in treatment. Even if a family exists to provide childcare while the mother is in treatment, that family may be dangerous for the child, replicating the same environment from which the drug-addicted woman came.

Women who enter TCs for substance abuse treatment typically are from lower social and economic backgrounds and from metropolitan areas that evidence poverty and fragmented families. Gaudenzia, Inc. (unpublished data) in Philadelphia reported that most women who enter treatment receive welfare. Over 90 percent of the women who enter Amity experienced poverty, violence, drug use, and crime in or around the home where they grew up. Many of these women now have children, and they have few choices of where to place their children while they are in treatment. Not willing or not able to leave their children with family members with whom they grew up, these women often are expected by court and childcare agency officials to put their children in foster care or even have parental rights severed in order to enter treatment (Stevens et al. 1989).

In addition, women who entered the Amity long-term residential TC indicated that they did not seek treatment due to social pressures placed upon them. They often feel that they suffer more severe social sanctions than men if they admit abusing drugs. Women are not expected to use drugs to the extent that it interferes with their ability to care for their children. Since women are seen as the primary childcare providers, they are expected to be home with their children rather than in treatment for themselves and their own drug addiction (Stevens et al. 1989).

Psychological Issues

Women and men show similar psychological problems and needs; however, women's problems often are more severe. Whenever one looks at a woman in treatment, "Generally she is much sicker and harder to treat. Her relationships with men have been terrible. She has been used, sold, beaten, violated, conquered, derided and exploited" (Densen-Gerber et al. 1972). A significant percentage, as high as 60 percent of women who enter treatment, report that they have experienced incest and molestation as children (Densen-Gerber and Rohrs 1973). Additionally, a 1980 NIDA study showed that 70 percent of addicted women had been raped or molested prior to their substance abuse (Wasnick et al. 1980).

Women who enter TCs also evidence a high percentage of incest and molestation as children and frequently experience rape as an adult. At Amity, of the 55 women who were enrolled in the long-term residential TC in 1991, 35 had been raped or molested before the age of 21, and an additional 15 had been raped after the age of 21 (table 3).

De Leon (1989) reported that women entering TC treatment display more severe psychopathology than men entering the same programs. (This finding is discussed in another chapter in this monograph.) Of interest, however, is De Leon's finding, after a review of the literature, that women show greater improvement during and following treatment in a TC than males (De Leon 1989).

In terms of self-concept, both clinical and research studies confirm that poor self-concept is a feature of substance abusers, as measured by the Tennessee Self Concept Scale (De Leon 1988). Typical profiles for both men and women show deviance in both of the self-esteem and adjustment scales. Women's profiles, however, evidence consistently poorer scores on measures and symptoms of self-esteem at admission (De Leon 1989).

CURRENT TC SERVICES FOR WOMEN: A NATIONAL PROFILE

In the late 1980s and early 1990s, an increasing number of women's programs began emerging within TCs nationally. In May 1990, Amity conducted a survey of 25 of the largest and oldest member agencies in Therapeutic Communities of America (TCA), which is an association of

TABLE 3. *Amity long-term residential TC: Characteristics of women in treatment in 1991 (n = 55)*

Characteristics	n
Average age	27
Age range	14-53
Combined number of children	70
Drug History	
Intravenous drug users	31
Average number of years using drugs	11
Number for whom Amity was first treatment alternative	26
Number who attempted other treatments prior to Amity	28
Average number of treatment attempts	5
Sexual History	
Histories of prostitution or trading sex for drugs	41
Average number of years of prostitution	5
Average (low) estimate number of sexual partners over the 2-year period prior to entering treatment	481
Percent (of 41) who never used a condom	16
Percent (of 41) who seldom used a condom	25
Number of women raped or molested before age 21	35
Average number of rapes	4
Number of women raped after age 21	15
Average number of rapes	6
Arrests	
No arrests	6
Arrested between 1-5 times	32
Arrested between 6-10 times	7
Arrested over 11 times	9
Average age at first arrest	19
Number on probation, intensive probation, or parole	39
Percent who used drugs in jail or prison	28
Average number of years incarcerated as a juvenile (< 18 yrs)	1.8
Average number of years incarcerated as an adult (≥ 18 yrs)	1.2

over 400 drug-free and self-help substance abuse treatment and rehabilitation agencies that use the TC modality. (See table 2 for results.)

Eleven agencies reported specialized programs for women and children. Those eleven were surveyed again in 1991 to obtain more indepth information on the specific program components and any research being conducted on this population.

This survey revealed the following:

1. There were a wide variety of program components in response to women's needs (e.g., individual and group counseling, academic and vocational training). All programs surveyed also included children in the therapeutic process, some through outpatient services and some residentially.
2. Research and evaluation differ tremendously from program to program, making it difficult to conduct a national evaluation on women's and children's programs.
3. Length of programs ranged from 6 to 30 months, with the average being 12 to 18 months.
4. Program size ranged from 5 to 20 women.
5. All programs included parenting and training classes, with many hands-on opportunities.
6. All programs addressed specific women's issues both educationally and therapeutically—some in women-only groups and some in mixed settings with male participants, family members, and others.
7. Two programs included special programming for the dually diagnosed.
8. Most programs reported that women with children seem to have more severe histories of drug abuse than their male counterparts, and they exhibit a greater diversity of multiple needs (e.g., physical and psychological health, education, vocation). Concern was expressed regarding whether these needs were being addressed, and whether women coming into treatment with children were even more

dysfunctional than the women traditionally seen in TCs who are either childless or whose children are placed elsewhere.

In response to issues such as longer criminal histories, severe sexual histories, and dysfunctional parenting, many programs have developed special curricula. These curricula include a variety of treatment components and methods (such as video feedback, seminars, groups, retreats, and workshops) provided in women-only and mixed group settings. For example, one area that has gained attention is the need for parenting education. Substance-abusing women generally are not equipped to provide positive role models for their children; often they model dysfunctional behaviors that later may be manifested in their children through delinquency and substance abuse (Feldman et al. 1987; Hawkins et al. 1985). The effects of maternal interactions on their children's social and emotional development have been documented over many years. Bowlby (1966) demonstrated a relationship between maternal deprivation and the development of antisocial personality disorders in their children. Substance-abusing women often neglect their children (physically and emotionally) while using substances or when they are acquiring the substances. Such neglect can interfere with the development of mother and child bonding and attachment.

In addition, the child who has been exposed prenatally to substances often exhibits behavioral characteristics that are difficult to cope with and very demanding of parents. These children often are difficult to comfort, and they move erratically and quickly from one state to another (e.g., sleeping to total hysteria with no period of quiet alertness exhibited by most infants) (Kronstadt 1991). When a mother's attempts to quiet her child consistently fail, this is often interpreted by the mother as the child's rejection of her or as a reflection of her inadequacy as a parent. Such maternal thoughts and emotions can inhibit the attachment process, placing an emotional distance between child and mother.

These women need an opportunity to learn appropriate parenting skills and to interact with other women who have shared similar experiences and feelings. The need for parenting programs within substance abuse programs was mentioned by each agency contacted in the Amity survey mentioned above. The programs described in the survey generally contained both classroom-type education and hands-on mother and child interactions under the supervision of trained staff.

A second area that demands attention is the function of sexuality and relationships and their impact on drug use (Mullen and Arbiter 1991). Not only do women (and men) in treatment often have severe sexual histories in terms of abuse, it is thought that those negative sexual experiences have an impact on drug use (Silbert et al. 1982; Testa 1991). Moreover, relapse often is related to failed relationships, especially for women. Gilligan (1982) noted that women define themselves and their sense of worth in terms of relationships. At Amity, it is considered important that both men and women address the following issues related to their sexual history: (1) women who had abortions and the men who were responsible; (2) women who prostituted and men who used prostitutes; (3) women and men who molested children or were molested themselves; (4) women and men who were raped or who raped; (5) homosexual experiences; (6) initial sex education; and (7) introduction to pornography.

At Amity, it is believed that sharing sexual histories creates a sense of community among women. Common sexual history creates a stronger sense of connection between women than any other variable, including race, age, or drug history (Arbiter 1991).

EFFECTS OF WOMEN'S PROGRAMMING ON THE GENERAL TC ENVIRONMENT AND TREATMENT OUTCOMES

Length of stay in treatment is one of the most consistently cited factors that affects posttreatment outcomes (Simpson and Sells 1982). Caton House in Philadelphia reported various influences on the length of stay, originating from both client and programmatic characteristics. The client characteristics associated with increased length of stay were increased age (over 25 years old), higher education (high school, GED, or better), fewer children (0 to 2), and those who were less likely to have suicidal ideation before or during the program. The program influences that correlated with increased length of stay included: (1) low turnover of directors; (2) decreased levels of confrontational therapy (part of the typical TC approach to therapy); (3) provision of more nurturant and affirmative support; (4) input from the participants in developing and updating their own treatment plans; (5) peers who have graduated from the program acting as role models; and (6) activities to encourage friendships and bonding among the women.

One factor mentioned repeatedly throughout the 1991 TC survey was the importance of women's programming and its impact on the entire environment. For example, the Amity staff have expressed the feeling that increased emphasis on women's issues and participation of more women in the environment have increased the safety level for self-disclosure for *all* participants (Stevens et al. 1989). Since self-disclosure is one of the key tools for change in TCs, this is an important element to explore.

Length of stay in treatment also was impacted by the introduction of specialized women's programming. Table 4 shows comparative lengths of stay for men and women before and after such programs were implemented. The average length of stay for both men and women increased in 1981, after the specialized women's programming began.

A second indicator of change is the degree of participation around family issues that men engage in during treatment. Since the initiation of specialized women's programs, it has been observed that many male participants began to take increased responsibility for their own children. For example, fathers in treatment began initiating correspondence with their children after years of silence. Requests for visitations with their children also increased (Stevens et al. 1989).

COST-EFFECTIVENESS OF SPECIALIZED PROGRAMMING

A variety of specialized programs for women have had positive results that have been documented over time (Hughes et al. 1991; Stevens et al. 1989). In today's world, however, these positive results must be judged against the cost of providing such services.

Several areas must be taken into consideration when determining the cost-effectiveness of specialized women's programming. Medical costs to society have increased drastically in recent years. These costs include both medical care and insurance rates. Although substance abuse is not the only cause for these escalating costs, it is certainly one contributing factor that cannot be ignored.

Substance abuse has impacted medical costs in several ways; 8 of the 15 hospitals surveyed by the Select Committee on Children, Youth, and Families reported an increase in "boarder" babies (i.e., babies abandoned

TABLE 4. *Amity gender differences in length of stay (LOS) by number of days*

Year	Men Admitted	LOS	Women Admitted	LOS
1974	18	105	7	57
1975	35	80	12	18
1976	82	120	18	48
1977	113	86	29	72
1978	117	103	16	94
1979	62	80	13	81
1980	NA	NA	NA	NA
1981	84	143	11	222
1982	58	173	18	376
1983	64	311	18	259
1984	79	216	29	224
1985	95	282	30	270
1986	64	326	31	261
1987	53	297	37	279
1988	89	272	42	231
1989	71	238	39	257

NOTE: In 1981, a female director was hired, female staff were hired, and all staff were educated in basic assumptions of the TC. In 1983, a women’s advocate was hired. In 1984, a mothers’ and children’s program was established. In 1986, the mothers’ and children’s program was closed.

in the hospital by their mothers) (Gittler and McPherson 1990). This is one facet of the economic burden of drug addiction that falls on society rather than on the drug-addicted mother herself. The medical costs of dealing with these drug-exposed infants are staggering. The average cost for a full-term infant requiring 10 days of nonintensive care hospitalization for symptoms of drug exposure is \$6,000. This figure can increase to \$135,000 for a drug-exposed infant requiring intensive care over several months (Kronstadt 1991).

In addition to the cost of caring for drug-exposed infants, substance-abusing women also often require expensive medical interventions due to long periods of neglect (e.g., no physical exams, poor nutrition, and high-risk behaviors such as drug injection or prostitution). Due to the poverty level of many such women, the medical costs incurred often are paid for through Government-subsidized medical care (Beschner and Thompson 1981; Gaudenzia, Inc., unpublished data; Kronstadt 1991).

A second area of financial impact to society is the cost of criminal activity. Incarceration generally costs between \$60 and \$70 per day, with costs increasing as the need for security increases (Gaudenzia, Inc., unpublished data; Glider et al., unpublished data). When compared to the costs of a TC, often 25 percent to 50 percent less than the above figures, the expense of not providing treatment becomes evident. In addition, calculation of the cost of criminal behavior also must include the expenses incurred by the taxpayer to support the system of law enforcement and prosecution. A third cost is that directly translated to the consumer through higher prices created to cover the costs of shoplifting.

The need for foster care for children of substance abusers also is escalating at an incredible rate. A study released by the National Black Child Development Institute in April 1991 reported that 36 percent of children in foster care across five urban cities had substance-abusing parents. Costs for the specialized foster care required by many drug-exposed children have been estimated at \$23,000 per year in Philadelphia (Gaudenzia, Inc., unpublished data). The annual placements of drug-affected babies in New York City have increased from 750 to 3,500 due to crack. The costs of this foster care have more than doubled, from \$320 million to \$795 million (Sofer, unpublished data). Similarly, Los Angeles County reported a 500-percent increase in foster care placements for children of substance abusers between 1981 and 1987 (Gittler and McPherson 1990).

Even the educational system is feeling the financial burden of children of substance-abusing parents. Johnson and colleagues (1990) stated that the educational cost of a child in a regular classroom is approximately \$3,500 annually, while the cost of educating a child in a pilot project for drug-exposed children in Los Angeles is \$15,000 annually. The Florida Department of Human Resources estimated that it will cost \$40,000 annually to prepare a crack-exposed infant for school. When all of these costs are taken into consideration (medical, legal, educational, social), the

evidence seems heavily weighted in favor of the cost-effectiveness of treatment for substance-abusing women.

SUMMARY AND CONCLUSIONS

The following major points can be summarized from this chapter:

1. Women and men have different characteristics and treatment needs; therefore, programs must be responsive to the specialized needs of women.
2. It appears that the presence of women in the TC environment as staff role models and program participants enhances treatment outcomes for both men and women, as evidenced by the LOS statistics and behaviors described previously.
3. Preliminary data from surveyed programs that provide services to mothers and children show positive effects for recovery (alcohol and drug use, parenting skills).
4. Conclusive data on women's and children's programs have not yet been generated, since many of these programs have been established within the last few years.

FUTURE PROGRAMMING AND RESEARCH RECOMMENDATIONS

There are several paths of research suggested by this review. One issue mentioned by several of the programs surveyed by Amity is the importance of determining whether treatment for women is more effective when only women are treated, or when men and women are in treatment together. Women appear to benefit from different treatment modalities than men have used (e.g., less confrontational), and their sexual history makes trusting men difficult. However, learning to trust men again is necessary for women's emotional health. This suggests an initial TC experience with women alone, followed by interaction with men when enough ego strength has been developed to optimize recovery. An interesting study might examine outcome effects from such a treatment strategy. However, outcomes for children must not be ignored. Longitudinal studies of outcomes for children should be examined,

considering both children who were with their mothers in treatment and children whose mothers underwent treatment without them.

With the growth in demand for substance abuse treatment, it is increasingly important to determine the costs and benefits of treatment versus alternatives such as incarceration or nontreatment. Within the treatment alternative, such variables as the optimal LOS should be examined for cost-efficiency.

Process evaluation remains a much discussed but underdescribed area requiring more research. The following questions in this area need to be answered: (1) which staff characteristics predict program effectiveness; (2) what program components are required to achieve successful posttreatment outcomes; (3) how are important TC concepts such as self-disclosure and peer role models measured; and (4) to what degree are the critical elements of the TC present, such as the challenging of held values, the playing of different roles, the provision of sustained responsibility, and the availability of credible teachers.

Finally, the measurement of outcome variables is the linchpin upon which all funding rests. Such outcome variables as alcohol and drug use, employment, criminal behavior, quality of life, effective parenting, and the quality of relationships need to be determined.

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Therapeutic Communities in Prison

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INTRODUCTION

Community-based therapeutic communities (TCs) have been found to have a positive effect on reducing the criminal activities and drug use of clients who complete their programs (De Leon et al. 1972; Simpson 1979, 1980). It is important to note that these studies included many clients with criminal histories. De Leon (1984) noted that the longer the client remained in treatment, the better the outcome. This time in program (TIP) effect was investigated by Wexler and colleagues (1990) and Wexler and Williams (1986a) in evaluating the Stay'n Out TC program in the New York State prison system.

A major aim of the Stay'n Out program evaluation was to assess the TIP effect in a prison-based TC, where clients remained longer than in community-based programs. One important finding of the studies (Wexler and Williams 1986a; Wexler et al. 1988a) was a replication of the TIP effect, clearly demonstrating the effectiveness of TCs in prison. Subsequently, a federally funded program (Project REFORM) successfully established drug treatment programs based on the Stay'n Out model in several other State systems (Wexler et al. 1991).

TCs incorporate certain common features: isolation from the rest of the community, use of ex-offenders and ex-addicts as staff, development of a safe environment, use of confrontation and support groups, clearly specified rules and sanctions, and the development of prosocial attitudes. As a treatment setting, TCs immerse clients in a highly structured and supportive environment. In a safe, but public, place, peers and treatment staff challenge clients to confront their problems directly and take responsibility. A TC is a place where clients live and often work for an extended time (often a year or longer) away from negative community influences.

In a prison setting, TCs operate in the same way. Inmates are housed separately from the rest of the prison population. The TC programs focus on criminal behavior, substance abuse, sexual abuse, and issues related to

living in the unit. While most prison activities stress security and custody issues, the TC emphasizes the inmates' personal growth and provides a safe place for free expression.

From a prison administrator's perspective, it can be useful to isolate inmates participating in a TC. The TC residents tend to be self-regulating and motivated to avoid conflict and cooperate with correctional staff. At a minimum, inmates are occupied; at the maximum, TC programs provide effective rehabilitation.

This chapter examines the history of TCs in prison, documents the empirical evidence of their effectiveness, describes a national technical assistance project (Project REFORM) that has helped establish new prison TCs, and offers guidelines for successful implementation of a TC behind prison walls.

EARLY HISTORY OF TCs IN PRISON

Until recently, few data were available from prison TC outcome evaluations (Camp and Camp 1989). The study of the early history of TCs in prison was limited to anecdotal information such as that offered by Camp and Camp (1989).

TCs in the Federal Prison System

The TC approach was attractive to Federal Bureau of Prisons (BOP) officials because of the development of the unit management system. The unit management system organizes institutions into functional units; each unit is managed by a unit manager who supervises the unit team (Levinson 1980). This approach makes it possible to manage a large prison as if it were several smaller institutions, each with its own case management team, disciplinary committee, and treatment staff.

Under the unit management system, it was easy to make one of the units a TC with its own program plan. Earlier drug treatment programs had been funded by provisions in Title II of the Narcotic Addiction Rehabilitation Act (NARA), which authorized Federal judges to commit convicted felons to prison drug treatment programs. The length of time served depended on the individual inmate's progress in rehabilitation.

An early NARA drug treatment site was at the Terminal Island, CA, Federal facility. This treatment program included a residential program that was a precursor to the TC, as well as psychotherapy and counseling, biofeedback training, a transactional analysis (TA) group, and educational, vocational, and social activities. Drug treatment aftercare planning was part of the inmate's prerelease programming. Although the program did not involve control groups, internal reports suggested better-than-average performance.

Marion, IL. One of the first and best known prison-based TCs was established in 1969 at the Federal BOP's maximum security institution in Marion, IL. The program, called Aesklepieion, was developed and implemented by Dr. Marty Groder, a BOP psychiatrist. The Marion facility recently had been opened to house inmates transferred from BOP's original maximum security facility, Alcatraz. It is noteworthy that the Aesklepieion program was implemented in the most secure facility in the Federal BOP, which housed the most difficult inmates in the Federal prison population. This contrasts with most early prison programs that were offered in low-to-minimum-security facilities. Because inmates in those facilities are most likely to avoid involvement with the criminal justice system after they are released, programs in less secure facilities are ensured of the appearance of success.

"Convict code" is a general term referring to inmate resistance to communicating with staff, supporting any staff or administration activity, and sabotaging as many aspects of the prison operation as possible. In many institutions, the convict code is physically enforced among the inmates. The strong convict code presented a major barrier to the development of the new culture provided by the TC. Aesklepieion staff developed effective strategies to combat this resistance. A key feature of the Aesklepieion program was that inmates could "call a game" on another inmate *or* a staff member, meaning that the individual was being confronted or challenged about a particular topic. This feature empowered inmates to take action, in contrast to the usual restricted prison situation. It also fostered an openness in communication between TC staff and inmates.

A second important feature of the Aesklepieion program that may have contributed to its success was the use of transactional analysis (Berne 1961; Harris 1967) and its special language. Code words and phrases (e.g., little professor, replaying tapes) added to the special nature of the program and gave the participating inmates a special form of

exclusiveness in an environment that greatly limits individuality. Membership in such an exclusive group can be very attractive to prison inmates. The program also was attractive to prisoners because participation in the program enhanced the likelihood of a favorable review by the parole board. Few similar opportunities were available to the inmates of the Marion facility.

The features that made the Aesklepieion program attractive to inmates also made it a source of conflict. First, the program's special language, privileges, and staffing created mistrust among staff and inmates who were not involved. Second, participating inmates were isolated from all other inmates because of their daily Aesklepieion activities and because most inmates had jobs in the same area of the institution. Third, inmates had too much control over the unit; the fact that they could confront staff as well as fellow inmates made working in the unit a threatening process for some staff. Finally, these factors were exacerbated by the general emphasis on security in this maximum security prison, making programs a low priority.

The lack of communication between TC staff and the rest of the institution made it difficult for other staff to understand the program and its features, and general mistrust evolved. The program eventually closed because of a combination of administration changes and difficulties in the institution itself. No data are available that provide an objective evaluation of the program's effects on outcome.

Federal Correctional Institution (FCI), Oxford, WI. During the evolution of the Marion TC, several other offshoot programs were developed at other Federal and State prisons. Inmates were used as staff in some State systems and as peer counselors in other State and Federal programs. For example, the program at FCI Oxford was started in 1974, just as the institution opened as a Federal facility. FCI Oxford was opened under a unit management model. The new TC was an Aesklepieion program modeled after the Marion unit, and it was implemented by former Marion staff and a core group of Marion inmates. The Marion inmates established the TC culture and set up the program at Oxford, which continued for nearly 5 years.

The FCI Oxford program allowed inmates a central role in the recruitment and selection of inmate participants within the institution. Inmate graduates conducted classes for the general prison population on the basics of TA. Inmates referred to the classes as "TA-101" and

"TA-102," identifying them as basic courses. Inmate instructors used these classes to identify others in the general population they deemed suitably motivated to participate in the TC program. While the selection process was conducted by staff, inmates made specific recommendations as part of the screening process.

Inmates at Oxford, like Marion, were enthusiastic about entering the program, and a waiting list was developed periodically. Some of the incentives for entering the Oxford TC included extra privileges. The program featured premium housing in comparison with the rest of the institution, and the unit was open only to participants. In general, participants were separated from the rest of the institution and had little contact with other staff and inmates. The program survived several administrative changes and turnover of inmates until it was closed in 1979.

Other Federal Programs. Other programs were developed with the use of Marion and Oxford inmates as core members of the new unit. In 1977, for example, an attempt was made to develop a TC at FCI Miami by using inmates from the Oxford facility. That program was short lived when the facility's mission and the characteristics of the prison population changed. The Miami facility soon housed a large number of major drug offenders and immigrating Cubans because of the growing drug-related criminal activity in the region and the large number of Cuban mental patients, prisoners, and other "undesirables" sent by Fidel Castro.

Other Federal facilities that included TCs were listed by Camp and Camp (1989) as follows: Ft. Worth, Tallahassee, Terre Haute, Terminal Island, Danbury, FCI Miami, and FCI Seagoville, TX. All of these programs were closed eventually. Some TCs closed when it was found that the TC inmates were involved in dealing and using drugs. The corruption of the units was engendered by the staff's loss of control over the program. In most of these programs, the units were closed to outsiders; not even staff from other units or programs entered the unit very often. Further, inmates were allowed to manage many aspects of the unit with almost no supervision. At FCI Seagoville, for example, several inmates in the TC screened program candidates; eventually, they began selling admissions to the unit. These are prime illustrations of the consequences of allowing inmates too much control over their own programs.

The Demise of Federal TCs. The Federal initiative in the use of TCs in prison, along with all other programs, declined in the late 1970s. Camp and Camp (1989) attributed the decline in TCs to a loss of support for TCs in the Federal BOP during that period. There also was general dissatisfaction with all types of treatment programs throughout the corrections field during the late 1970s. This disillusionment came in the wake of a general loss of confidence in treatment programs crystallized by Martinson's (1974) *Public Interest* paper. That paper was read widely by BOP officials and became one of several bases for a general trend away from providing treatment to inmates.

The basic message of the literature review on prison treatment programs (Lipton et al. 1975) was that there was little evidence that programs worked, and more carefully designed evaluation studies were needed. However, the review frequently was misinterpreted to mean that existing programs were ineffective, rather than the actual conclusion that the studies could not show that such programs *do* work. Subsequently, the Federal BOP placed more emphasis on less intense treatment modalities such as educational and vocational programs. Rehabilitation programs and ideas were no longer seen as a priority in the BOP mandate. Most criminal justice agencies and academic studies turned to concerns about "just desserts" and the control of prisoners. Correctional research innovations were directed toward such inmate management notions as "humane incarceration" (Morris 1974) and no longer toward rehabilitation goals (Love and Ingram 1982; Love et al. 1986).

Treatment programs in general lost administrative support; most were discontinued or reduced in scope and intent. The Federal BOP's earlier emphasis on providing intensive treatment for criminal behavior and drug/alcohol use was discontinued. Unfortunately, none of the TC programs had compiled outcome data on their impact on inmates' subsequent criminal or drug-using behavior. In the absence of appropriate data, support for resource-intensive TCs diminished among administrators and employees. The general feeling was that TC programs did not work anyway.

The lessons learned from the early TCs in Federal prisons support the recent applications of the TC approach to prison-based interventions such as Stay'n Out and Project REFORM. First, the program managers must orient the prison staff, administration, and inmates to establish clear expectations about the TC and to prevent ambiguity and misunderstanding about the program and its implementation. Second, TC staff

should not be insulated from the rest of the institution; prison staff should receive cross-training in all programs offered in the facilities. Third, the potential for alienation between security and treatment staff must be addressed immediately and appropriately. The program staff should incorporate security concerns in the TC program and operations. Fourth, the TC staff must retain sufficient control over the program.

TCs in State Prison Systems

The early history of TCs in State prison systems exhibits many of the same problems identified in the Federal prison system: programs out of control, staff mistrust, and poor communication. Many of the State prison TCs examined by Camp and Camp (1989) were derived from the Aesklepieion TC at Marion. Former inmates from Oxford and Marion were employed to develop and manage these TCs. For example, the Arkansas Department of Correction established a TC in a work release facility using the Aesklepieion model, and former graduates of the Marion program served as TC staff. The program endured similar resistance to that experienced in the Federal facilities but finally was accepted by both the staff and administration. However, the status of the program was weakened substantially after correctional staff found drugs and alcohol on the unit. The final straw came when the director of the program was arrested on drug and alcohol charges.

Several other State prison systems used the TC as a treatment modality. The Connecticut and Virginia State prison systems opened TCs based on the Aesklepieion model. These programs were closed because of increasing prison populations and the need to provide less expensive programs for more inmates. According to Camp and Camp (1989), the TCs also were targeted because they failed to maintain an open line of communication with the rest of the institution. Finally, TC staff members were not well accepted by security staff.

In addition, other States implemented less intense TC programs that were discontinued because of increasing inmate populations, reduced resources, and resistance from key administration officials. None of these programs provided outcome evaluations or collected data that would be useful to assess their integrity or effectiveness.

One study did demonstrate the efficacy of TCs as a suitable treatment approach for prison inmates (Nash 1973). Nash evaluated seven prison-based drug abuse treatment programs, using changes in arrest rates

as a major dependent measure. This evaluation assessed changes in arrest rates for a total of 173 inmates who attended seven prison-based programs. Four of these programs were TCs based on the original Synanon model, two were counseling programs, and one was a drug-free residential program. Although the original study by Nash did not find significant differences in arrest rates between any of the programs and treatment comparison groups, a more extensive analysis by Des Jarlais and Wexler (1979) found that two of the four TCs did significantly better than the comparison groups.

RECENT HISTORY OF TCs IN PRISON

Stay'n Out

The Stay'n Out program was the first in-prison TC to be extensively evaluated (Wexler et al. 1988*b*). Stay'n Out is located in two New York State prisons: one for men at the Arthur Kill Correctional Facility on Staten Island, and the other for women at the Bayview Correctional Facility in Manhattan. The rationale for the development of Stay'n Out was based on the growing research on community-based TCs, according to Wexler and colleagues (1988*b*). Community-based TCs are widely accepted and have been demonstrated to be effective with clients who have criminal histories (Bale 1979; De Leon 1984; De Leon et al. 1972, 1979, 1982; Holland 1978; Nash 1973; Sells et al. 1976; System Sciences, Inc. 1973; Wilson and Mandelbrot 1977).

Evaluation of the Phoenix House program (De Leon 1984; De Leon et al. 1979) provided direct support, because the Stay'n Out model is based on the Phoenix House program. Not only were the results of the Phoenix House evaluation supportive of TC effectiveness in a 5-year followup study, but it was found that successful outcomes (i.e., reduced crime, reduced substance abuse rates, and increased employment) were related to the time spent in treatment (De Leon et al. 1979, 1982; Simpson 1979, 1980). This TIP factor has been the subject of several subsequent research studies.

The Stay'n Out program was implemented in July 1977 as a modified, classic hierarchical TC. It began at a time when many other in-prison TC programs were closing. Program capacity was 120 inmates when this research was conducted. Residents lived in dedicated housing units separate from the rest of the prison population. They had contact with

prisoners in the general population only when off the TC unit (e.g., at the cafeteria, infirmary, or library). The Stay'n Out staff was comprised mostly of ex-addicts with TC experience. The employment of ex-addicts as counselors is consistent with the practice of community-based TCs. One important function of the ex-addicts, particularly among the prison population, was to serve as role models for the clients.

The evaluation of the Stay'n Out TC offered a timely opportunity to gather new information about the TIP effect noted by De Leon (1984) in community-based TCs, because Stay'n Out is a prison-based TC. The TIP effect reported in previous studies was diminished by the high early dropout rate in the community-based TCs (De Leon et al. 1979). It was expected that prison inmates would remain in the TC longer and thus provide a clearer picture of the TIP effect. Inmates were expected to find participation in the TC program sufficiently attractive to remain as long as they could. For example, the TC unit provided more desirable housing (quieter, better maintained) than regular prison units. Further, the TC offered more activities that reduced the daily boredom of regular prison routines, provided more special incentives, and offered opportunities to impress the parole board.

Early research on Stay'n Out showed that the program was successful in implementing and maintaining a positive TC treatment environment, was capable of retaining inmates for optimal treatment durations (9 to 12 months), facilitated positive personality changes as assessed by standard psychological measures (Wexler and Chin 1981), and produced positive outcomes (Wexler et al. 1985). Wexler and colleagues (1988*b*, 1990) reported on a more extensive study that examined the effectiveness of prison-based TCs and assessed the TIP effect. The quasi-experimental design compared Stay'n Out participants with a group of inmates who were on a waiting list for the TC and with two groups who participated in other programs (of varying intensity) in different prisons (milieu and counseling programs). Male and female inmates who completed the program between 1977 and 1984 participated in the study. The average TIP ranged from 5 to 8 months across the four program groups, who differed significantly in terms of TIP. The total time in prison for the current sentence generally was longer for males than females. These and other differences were controlled in the analyses of followup data.

Wexler and colleagues (1988*b*) reported that the differential outcomes among the four groups in the study generally were supportive of the prison-based TC program. The percentage arrested after treatment was

lowest for the Stay'n Out TC group (26.9 percent) and increased as the intensity of treatment decreased (to a high of 40.9 percent for the no-treatment, waiting list group). Among the male study groups, the Stay'n Out program was substantially more effective in reducing the percentage arrested than the comparison treatment groups and the no-treatment group. However, among those arrested, there were no differences among the groups in length of time to arrest. Approximately 60 percent of the Stay'n Out TC group received positive parole discharges, but this rate was not significantly different from the rates for the other male groups. The female Stay'n Out TC group had the lowest percentage arrested (17.8 percent) and the highest percentage positively discharged from parole (77.2 percent); the differences were not statistically significant.

The TIP effect reported in earlier studies was substantiated in the Stay'n Out evaluation. In the analyses, participants were divided into five subgroups according to the amount of time they were in treatment (less than 3 months, 3 to 5.9 months, 6 to 8.9 months, 9 to 11.9 months, and over 12 months). Wexler and colleagues (1988*b*) performed extensive analyses of the TIP effect on percentage arrested, time until arrest, and percentage positively discharged from parole. The general pattern in several analyses was that as time in the Stay'n Out program increased up to a year, positive parole outcomes increased, followed by less positive outcomes for those who stayed longer than a year. This pattern was clearly demonstrated with the time to arrest variable. The mean time to arrest for clients who stayed in the program for 3 months or less was approximately 9 months; for clients in the program between 9 and 11.9 months, the average time until arrest increased to 18 months; and for clients in the program over 12 months, time until arrest decreased to an average of 14 months.

An even more striking demonstration of the TIP effect was found in the percentage of participants who were positively discharged. For example, positive parole discharges for males increased from 49 percent for the under 3 months group to a peak of 77 percent for the 9 to 11.9 months group, and then decreased to 57 percent for the over 12 months group. Similar results were found with female clients. The authors suggested that inmates who successfully completed the 9 to 12 months of treatment were optimally prepared for release to the community. The data further suggest that remaining incarcerated after completing the program may be demoralizing and detrimental to the client's postrelease performance.

Cornerstone

Independent confirmation of the utility of TCs in prison has been provided by evaluation of the Cornerstone program, a currently active program described by Field (1984, 1989). Cornerstone is a prerelease treatment program for alcohol- and drug-dependent offenders, which opened in 1976 on the grounds of the Oregon State Hospital in Salem. It consists of a 32-bed residential unit and a 6-month aftercare program. Cornerstone operates under the joint auspices of the Oregon Divisions of Mental Health and Corrections. Inmates are referred to the program by prison counselors if the inmate has a history of substance abuse, qualifies for minimum security (including the criterion of having 6 to 12 months left to serve), plans to remain in the State after release, and has no diagnosis (such as psychosis or sex offender) that would limit the program's effectiveness or survival.

Inmates participating in the Cornerstone program have severe histories of criminal behavior, as was the case in Stay'n Out. In 1984, for example, Cornerstone clients had an average of about 7 felony convictions and had served more than 7 years in prison. This group also included very experienced drug users, starting substance abuse at the mean age of 12 years. Nearly all participants (95 percent) had histories of polydrug abuse.

The Cornerstone program, like Stay'n Out, is based on the classic TC concept. There is a clearly articulated set of rules with consequences for failure to comply (cardinal rules prohibit behaviors such as using drugs or resorting to violence), inmates participate in the operation of the program, and the program employs social learning and self-help concepts. The violation of cardinal rules is grounds for dismissal, but all other rules are seen as learning opportunities and are sanctioned by requiring the inmate to perform more appropriate behavior. Participants also earn privileges (especially increased freedom) by exhibiting good behavior. Program components include family meetings, encounter groups, classroom instruction on skills, individual counselor sessions, and participation in Alcoholics or Narcotics Anonymous. Completion of the residential program is followed by a 6-month aftercare phase in which residents are free in the community but maintain contact with Cornerstone staff, parole officers, and outpatient drug treatment staff.

Two outcome evaluation studies of Cornerstone (Field 1984, 1989) demonstrated the effectiveness of a TC in a modified prison unit on State

hospital grounds. The overall results of Field's research are similar to the findings of the Stay'n Out program. The first evaluation (Field 1984) examined 3-year outcomes for all inmates who graduated from Cornerstone between 1976 and 1979. The graduates were compared with three groups: Cornerstone dropouts (with less than 1 month stay); all Oregon parolees with a substance abuse history; and a sample of parolees from Michigan. There were no statistical differences among demographic and background characteristics for the program graduates ($n = 144$), the dropouts ($n = 27$), and the sample of Michigan offenders ($n = 217$). The only prior differences among the groups was the Oregon parolees ($n = 179$) who had significantly less severe histories of substance abuse and crime than the Cornerstone graduates. The four groups were compared on two measures of outcome: percentage not returned to prison and percentage not convicted.

The 3-year followup of Cornerstone graduates clearly showed that the graduates exhibited significantly better postrelease performance than any of the comparison groups. Although the Cornerstone graduates had more severe criminal histories, 71 percent of program graduates were not reincarcerated 3 years after release in comparison to 63 percent of Oregon parolees. Similarly, although slightly more than half the program graduates were not convicted of any crimes, only 36 percent of the Oregon parolees were not convicted of any crimes. Program dropouts fared even worse, with only 26 percent avoiding reincarceration and 15 percent not convicted of any subsequent crimes.

A second study of Cornerstone (Field 1989) not only substantiated the effectiveness of the Cornerstone TC but also found a TIP effect similar to that reported by Wexler and colleagues (1988*b*). Field's study, based on a much smaller sample than Wexler's (n 's range from 43 to 65), compared a group of Cornerstone graduates (average stay = 11 months) with three groups of clients who did not graduate but spent more than 6 months, 2 to 6 months, or less than 2 months in the program. The three measures of recidivism that were assessed in the 3-year followup were arrest, conviction, and reincarceration rates.

The TIP effects reported by Field (1989) were consistent across all three measures. The no-arrest rate (37 percent) of graduates during the 3-year period following release was superior to the rates of dropouts in the 6 or more months and 2 or less months categories (21 percent and 8 percent, respectively). Just over 50 percent of the Cornerstone graduates were not convicted of a new crime within the 3-year period, versus 28 percent for

residents who did not graduate but remained for over 6 months. Only 11 percent of those who were in the program for less than 2 months were not convicted.

Reincarceration rates followed a similar pattern, with nearly three-fourths of the graduates not incarcerated during the 3 years after release, versus 37 percent of those who did not graduate but remained in the program for more than 6 months, and 15 percent of those who were in the program for less than 2 months. Clearly, length of stay in the program had a positive effect on outcomes of prison TC programs.

Wharton Program

The TC approach also has been successfully employed with youthful offenders in the Wharton Tract Narcotics Treatment Program (Platt et al. 1980). The New Jersey TC opened in 1970 and housed 45 youthful offenders (over 19 years of age) in a former State forestry camp. The Wharton program included three stages: evaluation, intensive therapy, and a transition phase to ease residents back into the community. Treatment interventions included guided group interactions, group interpersonal problem-solving, couples therapy, family counseling, individual counseling, and recreational activities.

Platt and colleagues (1980) conducted a 2-year followup comparing the outcomes of 160 graduates of the Wharton program with 140 comparison group members. The latter group were people who met the criteria for the program but did not enter the program for a variety of reasons. There were no background differences between the two groups. The TC participants performed significantly better on recidivism measures. They had a significantly lower reincarceration rate (18 percent) than the comparison group (30 percent) and significantly fewer arrests in the 2-year period (51 percent were arrest-free) than the comparison group (34 percent).

Summary of Recent History of TCs In Prison

The effectiveness of prison TCs was substantiated by evaluation research during this period. The following evaluation findings are consistent with the conclusions drawn about the Stay'n Out program by Wexler and colleagues (1988*b*).

1. The TC is a viable approach that can be successfully administered within a prison environment.
2. The TC approach has been demonstrated to have a significant impact on reducing recidivism.
3. The TC approach is more effective than other approaches to which it has been compared.
4. The greater the time spent in the TC, the lower the recidivism rates. TCs are maximally effective for inmates who spend 9 to 12 months in the prison TC.

The Stay'n Out, Cornerstone, and Wharton evaluations provided convincing evidence that prison-based TC treatment can produce significant reductions in recidivism rates.

CURRENT STATUS OF TCs IN PRISON

Federal Prisons

The Federal BOP recently has undertaken a major substance abuse treatment initiative. Murray (1991) reported that 51.7 percent of Federal inmates have a documented substance abuse problem. The increasing inmate population (projected to reach 95,000 by 1995) also includes an escalating number who have been incarcerated for drug offenses. Currently, 51 percent of Federal inmates are incarcerated for drug offenses; this rate is projected to reach 69 percent by 1995. Murray reported that in a recent BOP survey, 43.8 percent of the inmates who were diagnosed as having a substance abuse problem requested to participate in drug abuse treatment.

The new BOP approach includes a hierarchy of programs of increasing intensity. The basic programs include a 40-hour mandatory drug education program, voluntary drug counseling, 9-month voluntary residential treatment, and 12-month residential treatment.

The Federal BOP approach presupposes that one treatment program will not serve all inmates. Instead, programs of various intensities will be made available for all eligible inmates, allowing them to enter the programs of their choice. The educational and counseling component

employs a relapse prevention model (Marlatt and George 1984; Marlatt and Gordon 1980), and some programs use a 12-step approach. A transitional care program, designed to assist the offender in preparing for continued drug abuse treatment and support after release, is provided for inmates who complete treatment programs. The Federal BOP currently is involved in a joint project with the National Institute on Drug Abuse (NIDA) to assess the efficacy of intense residential treatment programs. The Federal BOP has acknowledged the influence of Stay'n Out and Project REFORM in many features of the new Federal program (Murray 1991).

State Prison Systems

Project REFORM. In response to increasing public demands that something be done about the growing drug problem, State and Federal legislatures have enacted determinate and mandated sentencing laws, resulting in a sharp increase in the number of inmates in U.S. prisons. The number of incarcerated offenders in jails and prisons, numbering approximately 500,000 in 1984, reached nearly 1.2 million in 1991. A large proportion of newly incarcerated offenders are involved with drugs as either users or dealers. Estimates of incarcerated individuals with drug-related crimes or substance abuse problems range from 70 to 85 percent.

One response to the growing need for in-prison drug treatment programs was a Bureau of Justice Assistance (BJA) program called Project REFORM. Project REFORM was designed to help State prison systems develop corrections-based drug treatment programs (Wexler et al. 1991). The program was funded through the Anti-Drug Abuse Act of 1986, which called for substantial new resources for correctional drug treatment efforts.

Project REFORM (1987-1991) was unique in several important respects. First, it offered technical support to State prison systems in developing new programs for their growing populations. This meant that a State system could use consultants available from Project REFORM to develop their program. Second, the State prison systems were offered orientation and training programs as part of Project REFORM. This provided a vehicle for State systems to profit from the collective experience of other Project REFORM programs. Third, Project REFORM established an evaluation procedure as part of the project. Each participating State system developed a design and data collection procedure to ensure

meaningful and effective program evaluation. These evaluation components also were supported with consultation services from Project REFORM.

State systems that were willing to develop systemwide drug treatment efforts were selected on a competitive basis. The project began in July 1987, and the first group of States was selected that year. The major goals of Project REFORM were to reduce the amount of crime and drug abuse among previously incarcerated offenders after their release.

The Project REFORM program operated in two phases: planning and implementation. The Department of Justice provided funding to the States for both phases. The planning phase required the State system to develop a comprehensive Statewide plan for their prison-based drug treatment programs. Planning was funded by a BJA Federal grant. Project REFORM staff used a network of technical assistance experts who advised States about promising drug treatment programs and strategies and how to apply them to their specific circumstances. For States that successfully completed the first stage, funding was supported to implement selected segments of the programs.

Project REFORM made it possible for 11 State prison systems to share resources in developing drug abuse treatment programs, complete with an evaluation component. Project guidelines were developed partially in response to the lessons learned from earlier attempts to implement prison-based TCs in both Federal and State correctional systems. The guidelines for designing programs included the following recommendations (Wexler et al. 1991).

1. The programs were to be developed within the context of the realities of prisons. Custody and security issues were to be carefully considered in all planning.
2. Rehabilitation can be most effective when the efforts of both corrections and program staff cooperate to promote prosocial changes. This requires involving corrections staff in planning and organizing programs; cross-training of correctional, administrative, and program staff; and establishing and maintaining clear lines of communication among all segments of the prison staff.
3. All prison-based programs that address substance abuse and criminality must be consistent with the goals of all correctional staff

by providing cost-effective ways to reduce recidivism (Wexler et al. 1988a).

4. All segments of the prison environment must realize that the effectiveness of TCs in the community and in prisons has been supported by numerous evaluation research studies.
5. To maximize the long-term effectiveness of in-prison treatment program, an appropriate and complementary postrelease aftercare program must be part of the treatment. Without aftercare, graduates of the program who are released into the community will have less chance to survive in the community.
6. Program planning must be thorough and complete. Goals, procedures, and timetables should be established and monitored.
7. The outcomes for evaluation of the program must be objective and meaningful (e.g., urine monitoring, incident reports, rearrest rates).
8. The program must elicit support from both the community and other institution staff. This is achieved through extensive networking and communication of program activities.

Training was a key element in Project REFORM. Correctional staff and administrators at all levels participating in Project REFORM received training in drug abuse treatment issues. Project REFORM staff prepared trainers from many State systems to ensure continuous training within their prison systems. Executives were given special sessions to expand their appreciation for the role of drug abuse treatment in accomplishing their criminal justice goals. Cross-training programs were developed for drug abuse treatment and correctional staff to ensure that each understood the others' roles in the institution. National REFORM Training Workshops, which were held biannually, offered extensive hands-on and didactic training sessions.

Another key element was the focus on evaluation. Often, the demise of prison drug programs was associated with both the lack of evaluation data and questionable results from poorly designed studies. Without documentation of a program's effectiveness, it is difficult to obtain continued funding of programs. Continued program support requires regular evaluation. Therefore, each State participating in Project REFORM was provided technical assistance to develop an in-house

evaluation capability. Process evaluation was encouraged during implementation to adjust the program and ensure maximum effectiveness. Systematic assessment of inmates' drug histories was encouraged to establish a database and thereby enhance the systems capability to identify those needing treatment and determine the appropriate program for each. Another major purpose of the program was to establish a database for assessment of program effectiveness and client outcome.

Technical expertise was provided to assist each State in developing an evaluation plan. Procedures for establishing and maintaining evaluation capabilities were reviewed with participating States. In several States, for example, an individual was designated to be responsible for evaluation. General guidelines and standards for data collection were established. These guidelines recommended types of variables to be included (e.g., client characteristics, drug histories, incident reports). While each State operated independently, all were encouraged to maintain comparable data elements so that future comparative analyses could be performed.

Early in the history of Project REFORM, special attention was paid to the question of inmate classification and matching the client with treatment. Preliminary results of those efforts suggested that incarcerated substance abusers were less heterogeneous than originally thought, and the range of potential drug programs was limited. However, the concept of treatment matching remains an important one that warrants more extensive analysis (Wexler et al. 1991).

States also were also strongly encouraged to offer programs emphasizing the transition from prison to the community. Many inmates who participated in the prison outpatient and residential programs were offered prerelease transitional services, including reentry counseling and referrals to community-based programs. In some States, prerelease programs were followed by coordinated community-based treatment programs that continued the process begun in the prison.

Thus far, Project REFORM has assisted 11 States (Alabama, California, Connecticut, Delaware, Florida, Hawaii, New Jersey, New Mexico, New York, Oregon, and Washington) in developing comprehensive plans for prison-based drug treatment. In addition, according to Wexler and colleagues (1991), over 400 programs have been established or improved in response to Project REFORM initiatives, including assessment and referral sites (134), education programs (108), drug abuse treatment

resource centers (46), 12-step programs (115), prerelease and postrelease counseling programs (233), urine monitoring (146), and milieu (isolated) in-prison programs (62). Training sites for hands-on TC experience were established at the Stay'n Out program in New York and the Amity program in Tucson, AZ. Project REFORM also published a newsletter for all participating States to share ideas and experiences as well as to keep staff and administration informed of new developments.

Summary of Current Status of TCs in Prison

Since a large number of crimes are attributable to a relatively small number of chronic substance abusers, identification and treatment of abusers while they are in prison should have a major impact on crime rates. One of the major resources that Project REFORM offered was a demonstrably effective treatment strategy, the TC approach, along with the technical support to implement it. The Stay'n Out program, based on the Phoenix House model that had been to be effective with prison inmates, helped establish the foundation for these efforts.

Project RECOVERY extended and built on the work of Project REFORM through 1992, providing support to interested States through technical assistance, a newsletter, and semiannual National Training Workshops.

LESSONS FROM HISTORY: IMPEDIMENTS AND ENHANCEMENTS TO PRISON-BASED TCs

Many of the factors that affect the implementation of TCs in prison are relevant to any prison program.

Impediments to Effective Correctional Treatment

Prison systems are, by their nature, resistant to change. The primary function of any prison is security. Innovations that add to the risk of escape or otherwise detract from security are seen as a threat to the institution's primary purpose. The perceived differences in mission between security and program staff are often a source of frustration and friction in performing both tasks. Inmates are also skeptical of the purpose and motivation for new programs. They may resist from fear that the program is a way for the administration to attack the convict code, or in the belief that the program is another empty gesture by

do-gooders. Thus, it is not uncommon to find several levels of resistance to any drug treatment program in the prison setting.

Conducting an effective drug abuse treatment program in the prison environment is difficult. Interventions calling for openness and support of inmates conflict with the institution's needs for order and discipline. Treatment staff must somehow balance and integrate security and treatment considerations.

The resources needed for an effective TC are often burdensome to the institution, since a dedicated unit and special treatment staff are required. Inmates involved in such an intense program are likely to develop an understanding of what they need and become more organized and sophisticated consumers, placing pressure on prison resources. Inmates not in the program see that the TC inmates get special treatment (especially special privileges given as rewards) while they do not. This disparity may create problems for administrators. The special groups and other TC activities may necessitate special security arrangements. For example, operation of a TC marathon group may require all inmates in the group to be held on "outcount," meaning that the activity continues during institution counts.

The experience of the Federal and State prison systems, particularly in the implementation of Stay'n Out and Project REFORM, shows that the impediments to effective TCs in prison can be overcome. Important lessons learned from the cumulative experience of the past few decades focus on communication and training. Although a dedicated unit is essential to a successful TC, consistent and complete orientation of TC staff to the prison is vital. Existing prison staff must be trained about the TC and its philosophy, mission, policies, and procedures. Staff must maintain control over the dedicated unit in a manner that allows the inmates appropriate levels of power without granting the inmates too much control. Staff and inmates must have sufficient information about the TC unit, and they must be dissuaded from accepting myths about its operation (e.g., unusual initiation rites) and using disparaging terms to describe it. It is important to provide adequately trained staff and appropriate and consistent funding for the units. These programs are also more successful if adequate aftercare programs are provided.

Recommendations for Effective Correctional Drug Abuse Treatment Programs

Based on the Stay'n Out study and other research efforts (Lipton 1989; Lipton et al. 1992; Wexler et al. 1988*a*), there is evidence that drug abuse treatment in prisons can be effective. The majority of successful community-based and prison-based programs are derived from a social learning theory of criminal behavior (Bandura 1979; Nietzel 1979). This theory suggests that criminal behavior is learned through a process of social interaction. Effective treatment offers positive social interactions and leads to the development of prosocial behavior. This can be offered in a wide variety of programs including TCs.

The appropriate level of treatment depends on the stage of incarceration of inmates (i.e., length of sentence already served). Some approaches, such as drug education, are appropriate for any level of drug use or any point in the sentence. However, inmates who have extensive lifestyle problems and severe drug involvement need a more extensive program. The TC is a particularly successful modality for the more serious offenders. Inmate immersion into the TC environment provides the intense treatment necessary to modify criminal behavior.

GUIDELINES FOR EFFECTIVE TREATMENT IN AN IN-PRISON TC

Wexler and colleagues (1991) offered the following principles and guidelines on the basis of their experience with Project REFORM. These are general principles designed to guide State correctional systems in developing an overall drug treatment program for their prison population. From the broadest perspective, the principles Wexler and colleagues (1991) present are intended to encourage clearly stated drug treatment policies and better communication among agencies and sites that offer drug treatment. The principles focus on communication among staff to ensure support for the programs and direct all staff and inmates to the task of reducing recidivism.

In their description of the Stay'n Out program, Wexler and Williams (1986*b*) further elaborated on several features that contributed to the success of that program. These comments may assist others who are interested in developing new in-prison TC programs.

1. Creation of a psychologically safe environment where inmates can express their deepest emotions is one of the primary tasks of a TC. Such an environment was developed for the Stay'n Out program through a process of trial and error. For example, modifications to decrease the harshness of group confrontation, which is typical in community-based TCs, may require protocols for consistent and effective implementation in the prison environment.
2. Recognize and use cultural and ethnic differences among residents. For example, Hispanic TC members were taught to use English; other members of the TC contributed to helping them learn English. Cliques based on race or ethnicity were discouraged and a common family atmosphere was promoted.
3. Emphasize program integrity. The greater the perceived integrity of the program among the participating and nonparticipating staff and inmates, the more likely the program is capable of providing effective rehabilitation. Program integrity is related to the perception that the program is strong and coherent. The program must be autonomous, with cooperative and respectful interactions with the prison administration and institution staff. The fact that New York Therapeutic Communities, rather than prison staff, administered Stay'n Out helped create program integrity. Communications with institution staff were clear and respectful. The integrity of the program also supported credible authority with inmates while staff maintained positive relationships with the inmates.
4. Maintaining the respect of the inmates outside the TC program is important to program survival. Early in the history of the Stay'n Out TC, it became clear that the other inmates were not comfortable with the program and harassed TC residents. To gain the respect of those inmates, Stay'n Out residents entered sporting competitions in the institution. After other inmates observed the teamwork and winning style of the TC, they developed a respect for the inmates in Stay'n Out.
5. Survival of any program in the institution requires the maintenance of discipline. As with community-based TCs, the Stay'n Out programs have a set of cardinal rules: no drugs, sexual acting out, or theft. Violation of these rules meant expulsion from the program. The violations of any rules other than cardinal rules, however, were seen as learning opportunities. Enforcement of rules must be balanced

with needs to maintain credibility with the security staff, maintain discipline within the program, and focus on treatment. Stay'n Out program rules were enforced as part of treatment. Violators who committed infractions also were confronted by the community for their behavior. Often the offending inmates were given a contingency-based contract to allow them a way of working their way into exoneration. Even inmates who were expelled were allowed to reapply after a period of time. Thus, rule violators were given second chances. One manifestation of the Stay'N Out program's success is that correctional staff generally trusted the unit team to handle most disciplinary actions.

6. The use of ex-addicts and ex-offenders as program staff contributes to the success of the TC. This was demonstrated by the Stay'n Out staff, who clearly showed the personal strength and integrity of those who have successfully completed treatment themselves. These people are deeply committed and have the faith in the program necessary to inspire TC clients and maintain the respect of inmates and staff.
7. Some form of continuity of care must be offered to inmates. This requires the program staff to develop ties with community-based programs. The exact nature of the program (general supervision, self-help groups, or half-way house) depends on the inmates' specific needs and available community resources. For many offenders, prison-based treatment should be followed by treatment in the community.
8. Program evaluation should be a part of the program planning and continue throughout the life of the program. An effective evaluation informs staff about the implementation as well as effectiveness of the TC.

CONCLUSION: THE FUTURE OF TCs IN CORRECTIONS

The prison-based TC has become widely accepted as the treatment of choice for inmates with severe substance abuse histories. Through the efforts of States that participated in Projects REFORM and RECOVERY, a number of excellent programs have been established. As TCs are accepted as an effective way to reduce recidivism rates, more States are becoming interested in developing prison programs. Recently, Texas

passed a billion dollar bond package that provides for 25,000 new prison beds, including 12,000 dedicated to substance abuse treatment. The primary prison treatment modality being considered in the Texas system is the TC. As more prison TCs are established, the following issues require consideration.

1. Maintenance of program quality is difficult when many TCs have to be established in a short timeframe. Good TCs take at least a year to build up their treatment culture and establish a core of experienced staff and residents who can deliver a quality program.
2. Staff recruitment and selection are pressing issues. There is a finite number of trained recovering people who can serve as credible role models, having demonstrated several years of productive drug-free living. Many established community and prison TCs are concerned that they may lose their more experienced staff. A central employment service needs to be established to recruit and select staff and publicize job opportunities.
3. Training is one of the most critical problems in the field. Although Projects REFORM and RECOVERY have conducted a number of training events, and training facilities have been established at the Stay'n Out program in New York and Amity program in Tucson, training efforts must be expanded to meet the rising need.
4. The issues of program accreditation and counselor certification need to be fully explored. As the field expands, participants need to be professionalized and career paths need to be established. Care needs to be taken to include and use the vitality and experience of recovering people in this process.
5. The relationship between community and prison TCs needs to be strengthened. Many community TCs express some resistance to accepting parolees or giving them advanced status when they have prison TC experience. Prisons that are interested in developing TC treatment programs can receive invaluable assistance if they form relationships with local community TCs.
6. A continuous care model must be established. Major obstacles that face inmates upon release are inadequate education and vocational experience and a scarcity of jobs and housing. Too often, rehabilitated parolees return to their old neighborhoods, cannot find

work, become frustrated, and return to criminal lifestyles. The Stay'n Out program in New York and Amity-Rightturn program in San Diego have established community facilities to assist prison TC graduates returning to the community. Linkages between agencies in the education, health, employment, and housing areas must be strengthened to support the recovery process in the community.

7. Although research has established the efficacy of prison TCs, systematic studies are needed to explore variations in the TC model, identify for whom the TC is most effective, clarify the role of recovering staff, document the effects of the program on host institutions, and establish the cost-effectiveness of TCs.

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Co-Morbidity and Therapeutic Community Treatment

Nancy Jainchill

INTRODUCTION

Three facts have been critical to the growing concern and increasing knowledge about substance abusers in general and about their psychological characteristics in particular. First, there has been the recognition that treatment does not work for everyone and that informed policies might enhance treatment effectiveness. Second, the enculturation of drug use has brought a widening spectrum of people into treatment with a diversity of problems in addition to their drug use. Widespread drug use, earlier age of onset, and the greater variety of drugs used are associated with psychiatric, psychosocial, developmental, and physical problems (Friedman and Beschner 1985). Third, the development of improved research tools has made possible the investigation of psychiatric and psychological issues. The relatively recent formulation of an improved nosological system to classify disorders provided by the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-III, DSM-III-R) (American Psychiatric Association 1980, 1987) and the development of structured interviews to render diagnoses have enhanced the possibilities of more accurately and usefully distinguishing drug abusers who seek treatment along psychiatric dimensions.

Chein and colleagues (1964) suggested a characterization of the teenage addict that has applicability to drug users in general. They described a continuum that puts the multidimensionality of the addict into perspective and defines issues that are relevant to current attempts to understand the psychology of the drug abuser.

The addiction of the [adolescents] . . . studied was an extension of or a development out of, long-lasting severe, personality disturbance and maladjustment.

The addiction of the adolescents we have studied was adaptive, functional, and dynamic (Chein et al. 1964, p. 194).

Thus, two facets of addiction were recognized: one reflecting a pathological condition, the second an adaptive response to environmental conditions.

The changing trends in drug abuse patterns and in drug users seeking treatment have emphasized the importance of considering psychological and psychiatric factors in the treatment of substance abuse. Specific psychiatric disorders such as depression, antisocial personality, and borderline personality disorder appear to occur more frequently among drug users (Meyer 1986), although the question of sequence (i.e., cause) remains unanswered. Some recent investigative efforts have focused on clarifying the complex relationship between addictive conditions and psychopathology.

This chapter provides an overview of the research that has been completed as well as a discussion of the issues related to future research and treatment. Studies that reported on the psychological characteristics of substance abusers in treatment are reviewed in the first section. The second section presents a review of studies that utilized psychiatric assessments. In the final section, a discussion of the implications for treatment and research is offered.

DEFINITIONS

Psychological and psychopathological symptoms refer to conditions that are generally more transient than those described by psychiatric diagnostic classifications, and the symptoms may be situationally induced. Psychiatric disorders are defined according to the system of classification detailed in the DSM-III and DSM-III-R (American Psychiatric Association 1980, 1987). Each mental disorder is conceptualized as a clinically significant behavioral or psychological syndrome that is typically associated with either a painful symptom (distress) or impairment in functioning. This system provides a uniform convention for identifying and diagnosing symptomatology, which has important implications for treatment and research, as discussed later.

Substance use disorders are distinguished from other psychiatric disorders. The research described below (De Leon 1988a; Jainchill 1989) utilized DSM-III classifications, which differentiated between substance abuse and substance dependence. In the revised DSM-III (DSM-III-R), this distinction is eliminated because of "problems using social and

occupational consequences to define abuse, inadequacy of tolerance or withdrawal as a required criterion for dependence, and inconsistencies in the relationship of abuse to dependence for various substances . . . " (American Psychiatric Association 1987, p. 417).

PSYCHOLOGICAL PROFILES OF ADMISSIONS TO THERAPEUTIC COMMUNITIES

Instrumentation

The most frequently used measures have been the Minnesota Multiphasic Personality Inventory (MMPI), the Tennessee Self Concept Scales (TSCS) (Fitts 1965; Roid and Fitts 1991); the Beck Depression Inventory (BDI) (Beck 1979; Beck et al. 1961); the Shortened Manifest Anxiety Scale (SMAS) (Bendig 1956); the Shortened Schizophrenia Scale (SSS) (Clark and Danielson 1956); and the Symptom Checklist (SCL-90) (Derogatis 1983). These instruments have been standardized and their reliability and validity are established. They are self-administered measures that can be given individually as well as to groups.

Overview of Main Findings

The earliest studies investigating the psychological characteristics of drug users in treatment have reported data obtained from narcotic addicts and all-male samples, usually not from therapeutic community (TC) settings. Research involving TCs began in the early 1970s (De Leon et al. 1973) with a study that obtained measures of psychopathology in a cross-sectional sample of clients in a large urban TC. Scores were most deviant for residents tested during the early days of treatment.

Findings from other studies (De Leon 1974, 1984, 1988*a*, 1988*b*; De Leon and Jainchill 1981; Holland 1986) reveal that admissions to TCs yield high levels of depression and anxiety, poor socialization, and IQs in the dull-normal range. MMPI profiles generally are deviant. The prominent peaks indicate character disorder (Pd) and an elevated schizophrenia (Sc) scale, suggesting disturbed thinking and affect (see figures 1A, 1B). Self-esteem also is very low as indicated by the depressed TSCS profile, which also contains elements of emotional instability and delinquent profiles.

MMPI Females 1974

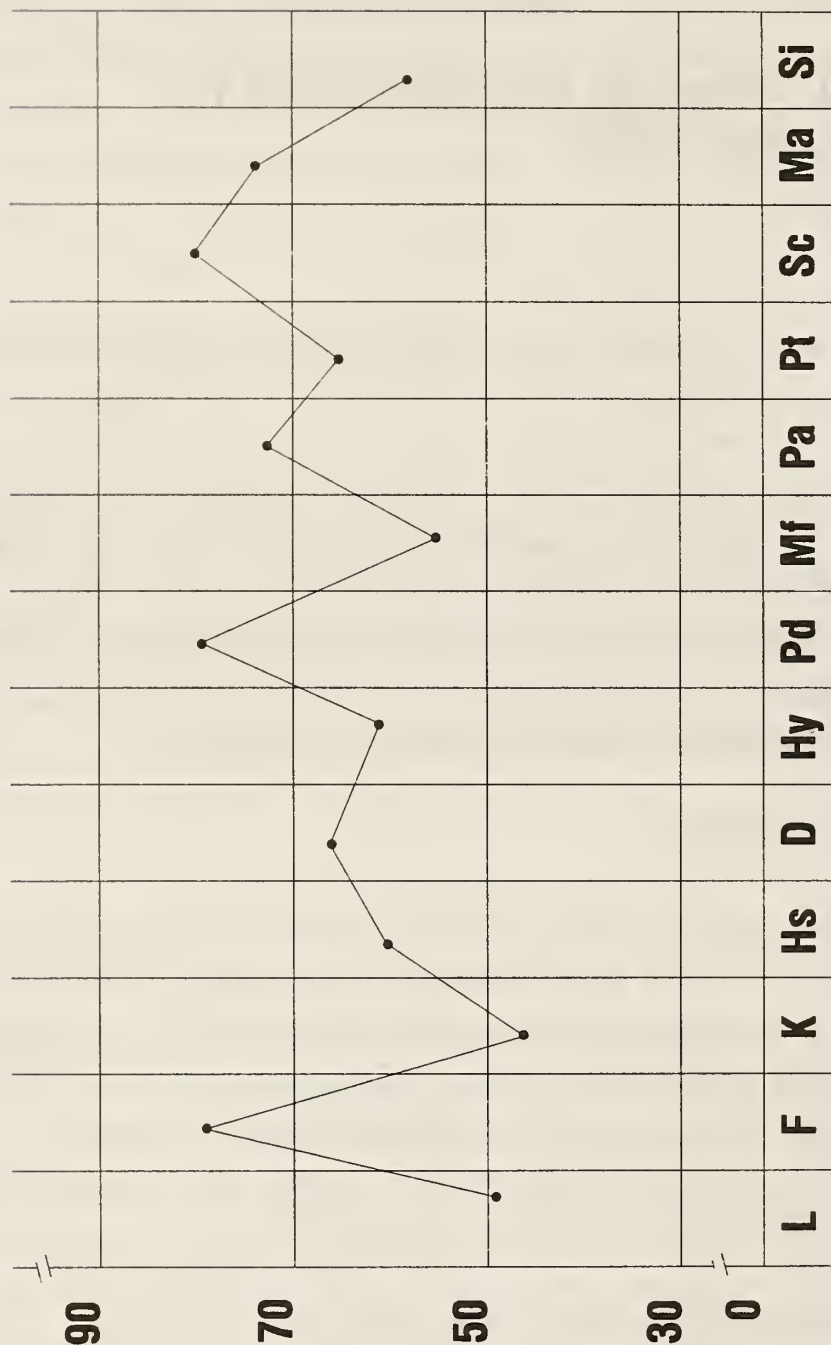


FIGURE 1A. *The MMPI profile of 1974 male admissions to TC treatment*

KEY: L = lie scale; F = validity scale; K = correction scale; Hs = hypochondriasis; D = depression; Hy = hysteria; Pd = psychopathic deviate; Mf = masculinity-femininity; Pa = paranoia; Pt = psychasthenia; Sc = schizophrenia; Ma = hypomania; Si = social introversion

MMPI Males 1974

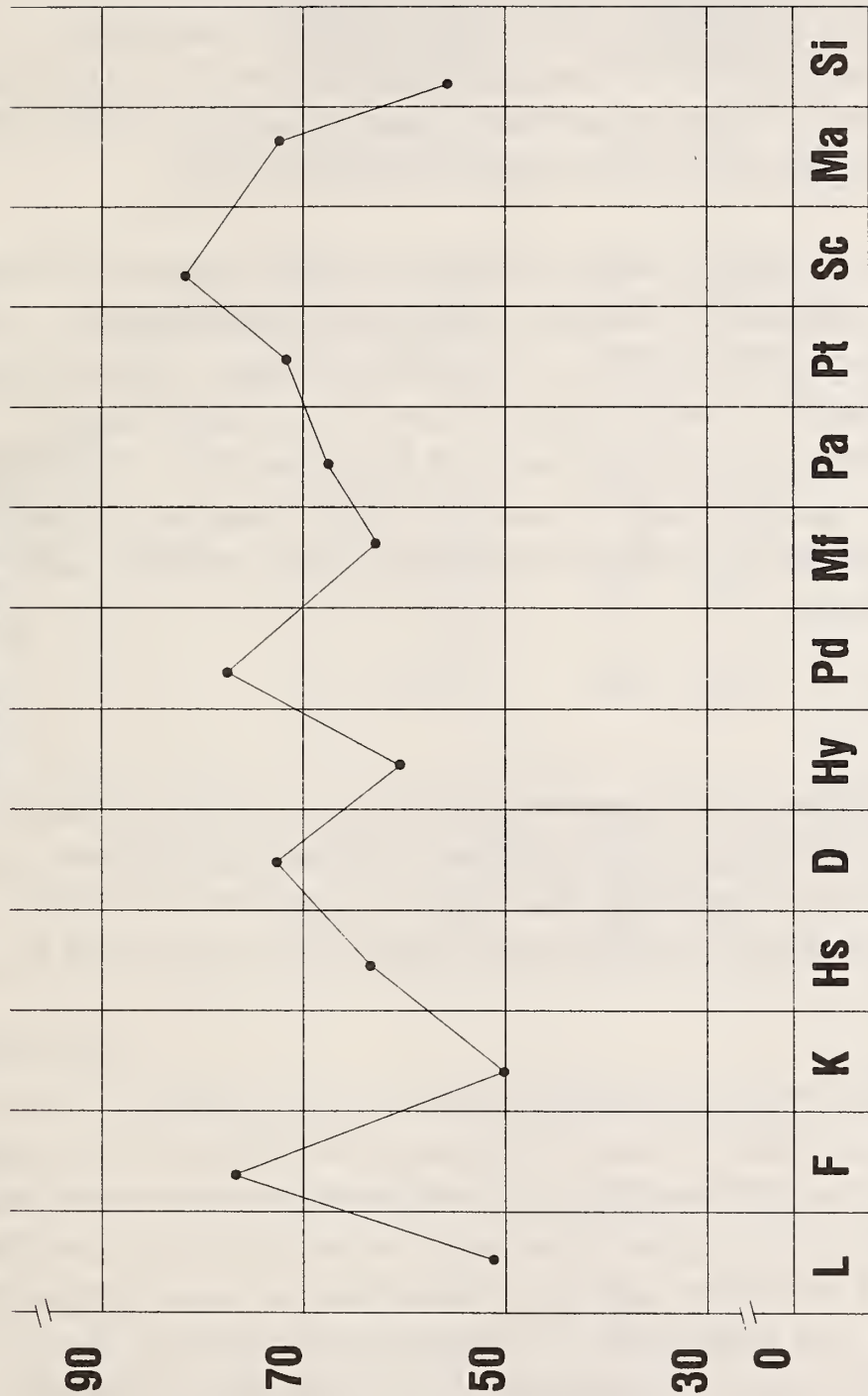


FIGURE 1B. The MMPI profile of 1974 female admissions to TC treatment

KEY: L = lie scale; F = validity scale; K = correction scale; Hs = hypochondriasis; D = depression; Hy = hysteria; Pd = psychopathic deviate; Mf = masculinity-femininity; Pa = paranoia; Pt = psychasthenia; Sc = schizophrenia; Ma = hypomania; Si = social introversion

Scores on the nine symptom dimensions of the SCL-90 (somatization, obsessive-compulsiveness, interpersonal sensitivity, depression, anxiety, hostility, phobia, paranoia, psychosis, and a global severity index) are significantly above normal, and the profile is similar to that of a comparison group of psychiatric outpatients. For the same sample, responses to a structured interview reveal that 38 percent had experienced a serious depression, 27 percent had had at least one anxiety attack, and 28 percent stated a previous suicide attempt (Holland 1986).

Demography and Primary Drug of Abuse. Females generally show poorer scores on measures of self-esteem and psychopathological symptoms (e.g., depression, anxiety, schizophrenic signs). However, the more stable dimensions of personality reflected on the MMPI show relatively few differences between male and female profiles. Whites and nonopioid abusers also generally reveal poorer psychological profiles, although this is probably due to an interaction between ethnicity and primary drug of abuse.

Trends

Recent research points to an increased prevalence of psychopathology among substance abusers in general (De Leon 1988a; Jainchill and De Leon 1992). This corroborates the clinical impression in TCs that among current admissions, psychological problems are worse than in earlier cohorts.

Comparisons among three entry cohorts (1974, 1979, 1984) are summarized below. The 1974 and 1984 samples are drawn from a single, large, urban TC. The 1979 sample was developed from admissions to a consortium of seven TC programs that were diverse in size and period of existence. Table 1 shows the demographic and drug of abuse profiles for the three cohorts. The 1984 cohort reveals poorer scores than either of the two earlier cohorts on psychopathological symptoms, particularly depression (see tables 2A, 2B). Similarly, although the shape of the profiles of the TSCS is virtually identical for the three cohorts, the statistically significant differences obtained generally indicate poorer scores for the more recent 1984 cohort.

Of particular note is that when controlled for gender, this trend is apparent for males but not for females. That is, across the 10-year study period, males entering treatment reveal increasing disturbance in terms of

TABLE 1. *Demographic and primary drug of abuse characteristics of admissions to the 1974, 1979, and 1984 cohorts*

	Phoenix House 1974 Cohort		Consortium 1979 Cohort		Phoenix House 1984 Cohort	
	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>
<u>Sex</u>						
Male	444	83.5	762	77.9	828	78.5
Female	88	16.5	216	22.1	227	21.5
Total	532	100.0	978	100.0	1055	100.0
<u>Ethnicity</u>						
Black	322	60.5	338	35.0	544	51.6
Hispanic	90	16.9	60	6.2	278	26.4
White	117	22.0	557	57.7	226	21.4
Others	3	0.6	11	1.1	7	0.7
Total	532	100.0	966	100.0	1055	100.0
<u>Age</u>						
< 19	94	18.6	206	21.3	233	22.1
19-26	248	49.1	466	48.2	440	41.8
27+	163	32.3	294	30.4	380	36.1
Total	505	100.0	966	100.0	1053	100.0
<u>Primary Drug</u>						
Marijuana	113	26.4	132	14.1	165	15.8
Cocaine	18	4.2	62	6.6	445	42.7
Opiates	166	38.8	320	34.2	283	27.1
Alcohol	108	25.2	85	9.1	57	5.5
Others	23	5.4	336	35.9	93	8.9
Total	428	100.0	935	100.0	1043	100.0

NOTE: A polydrug group was excluded from comparison since this category was defined only in the 1974 cohort. However, the majority of clients in all cohorts were multiple drug users.

TABLE 2A. *Means and standard deviations (SD) on four measures of psychopathology and beta IQ for three cohorts: 1974, 1979, and 1984*

<u>Scale</u>	<u>1974</u> (N = 492)		<u>1979</u> (N = 736)		<u>1984</u> (N = 949)	
	<u>Mean</u>	<u>SD</u>	<u>Mean</u>	<u>SD</u>	<u>Mean</u>	<u>SD</u>
Beck						
Depression	16.3	9.5	16.0	9.2	19.6	8.7
Anxiety	9.5	4.5	10.0	5.0	10.3	4.6
Schizophrenia	7.2	4.1	7.8	4.3	7.9	4.1
Socialization+	26.1	5.5	—	—	25.9	5.4
			(N = 657)		(N = 899)	
Beta IQ	91.2	14.7	86.7	13.8	82.9	13.1

KEY: + The Socialization Scale was not obtained on admissions to the seven programs of the 1979 Therapeutic Communities of America Consortium.

lower self-esteem and worsening symptom scores. However, females show little change, so that males and females entering treatment look increasingly similar psychologically (figure 2).

Improvement in Treatment

A number of studies report that psychological improvement is shown by clients who are reexamined during treatment (De Leon 1984, 1988b; Holland 1986; Zuckerman et al. 1975). MMPI profiles improve, specifically depressive and neurotic symptoms and the ego strength scale. Levels of self-esteem also show significant positive change, as do the SCL-90 scales measuring neurotic and psychotic dimensions (but not psychopathy).

TABLE 2B. *Summary of significant differences between cohorts on four measures of psychopathology and beta IQ: 1974, 1979, and 1984*

<u>Scale</u>	<u>Group Comparisons+</u>		
	<u>1974</u> <u>vs. 1984</u>	<u>1974</u> <u>vs. 1979</u>	<u>1979</u> <u>vs. 1984</u>
	<u>t-test</u>	<u>t-test</u>	<u>t-test</u>
Beck Depression	6.43***	0.54	-8.25***
Anxiety	2.97**	1.89	-1.18
Schizophrenia	3.46***	0.68	0.68
Socialization	-0.61	—	—
Beta IQ	-10.64***	-5.23***	5.52***

KEY: + The t-test for independent samples was used to assess group differences; *** $p < .001$; ** $p < .01$.

Retention and Outcome: Psychology as Criterion and Predictor

Psychological Status as Predictor. Initial psychological scores are not reliable predictors of retention or posttreatment outcome (De Leon 1984). Evidence suggests an indirect relationship between psychological disturbance and long-term outcomes, mediated through retention. Early studies by some investigators (De Leon et al. 1973; Sacks and Levy 1979; Zuckerman et al. 1975) reported that clients who left treatment against clinical advice had poorer scores at initial testing. That is, longer time in program is related to better psychological status at admission and also is predictive of later improvement.

The findings that relate psychological status to posttreatment outcome are inconsistent (De Leon 1984; De Leon and Jainchill 1981; McLellan et al. 1983, 1986). De Leon (1984), in contrast to McLellan and colleagues (1983, 1984), found virtually no differences between the admissions

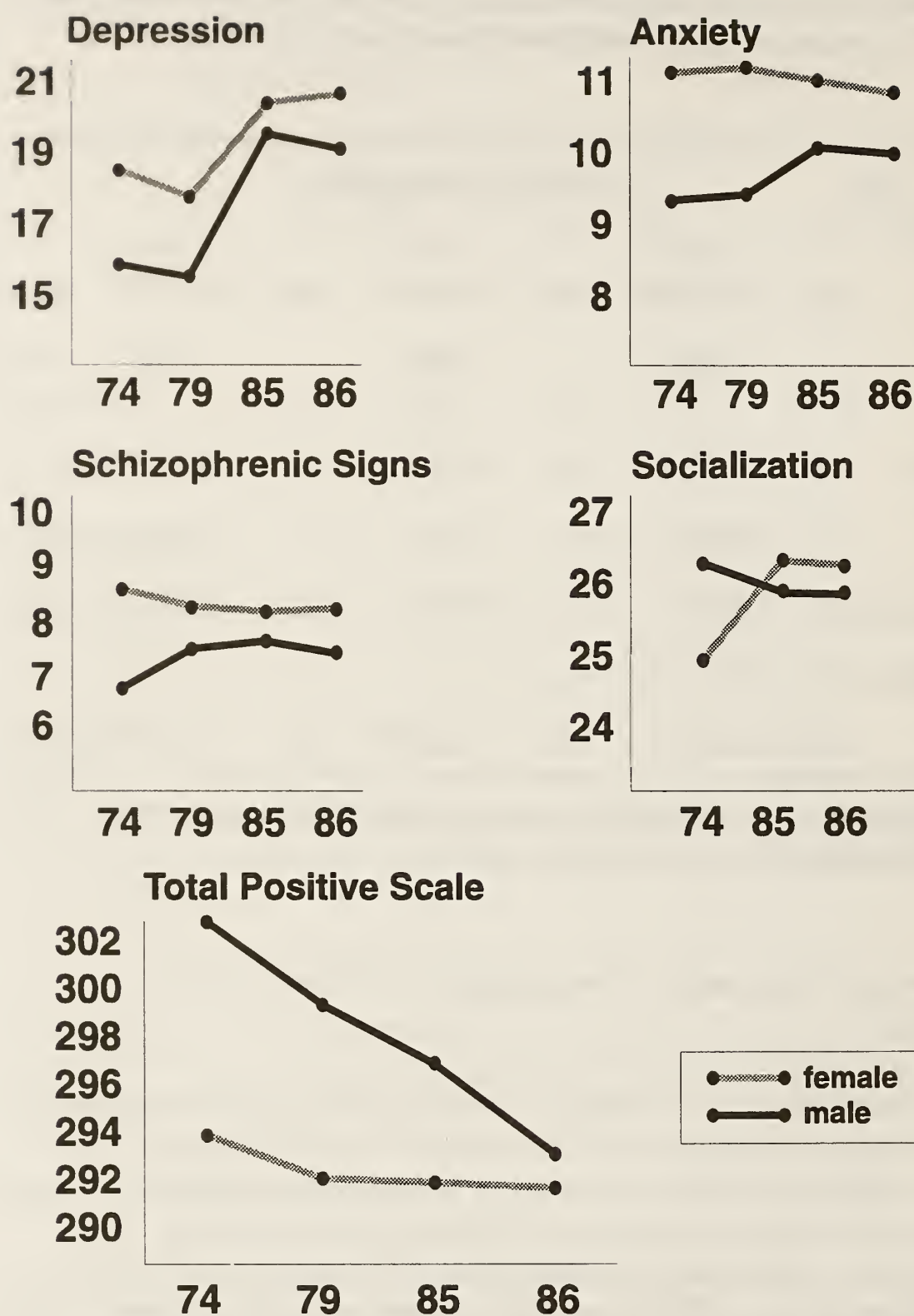


FIGURE 2. *The scores on five psychological scales are shown by gender for four different admissions cohorts to TC treatment. For females, the scores show little or no change across the 12-year period. However, male admissions show increasingly worse scores. There are virtually no gender differences in scores by 1986.*

psychological profiles of those who left treatment prematurely (dropouts) and those who completed treatment (graduates).

McLellan and colleagues (1983, 1986) found that greater pretreatment psychological disturbance was related to poorer followup status. In another study that investigated the relationship between psychological status, retention, and improvement, McLellan and coworkers (1984) also reported an interaction between time in program, psychological status, and improvement. Those with greater psychopathology at admission to a TC showed a worsening at 6 months followup, compared with those who were least disturbed and required minimal time in treatment. The strongest correlation between treatment duration and outcome was seen in the midseverity group.

However, the findings from these three studies must be interpreted with caution since the TCs were hospital-based, short-term programs (usually 90 days) and would not be considered by many to be true TCs. Furthermore, 90 days is a very short treatment episode in which to "cure" seriously disturbed individuals, whether in a TC or otherwise.

Psychological Status as Criterion. In the aforementioned study (De Leon 1984), both dropouts and graduates showed significant psychological improvement, although greater positive change was seen among individuals with longer time in treatment. De Leon also reported a positive relationship among other (nonpsychological) outcome measures, posttreatment psychological status, and retention in treatment. A success index was derived by assessing clients' posttreatment social adjustment on the dimensions of drug use, criminal behavior, and employment (De Leon 1984; De Leon et al. 1982). Individuals who were evaluated as unsuccessful at followup also showed no positive changes on psychological dimensions. In contrast, those revealing favorable social adjustment also showed significant psychological improvement at followup. Posttreatment psychological improvement, beyond positive changes obtained during treatment, was greater for females (De Leon 1984; De Leon and Jainchill 1981).

In summary, individuals who enter TCs show a marked degree of psychopathology, as indicated by deviant scores on measures of depression and anxiety and on the symptom dimensions of the SCL-90. Their self-esteem is low, and the pattern of the profiles resembles that of psychiatric and criminal populations. Psychological profiles appear to be worsening across the 10-year period from 1974 to 1984, particularly for

males. The findings vary concerning the relationship between psychological status at admission and posttreatment outcome, and at best suggest a weak association.

Psychological status at followup is related to retention and to other posttreatment behavioral measures. Longer time in treatment is correlated with greater psychological change at followup, which also is associated with more positive outcomes on behavioral measures (e.g., no drug use, no criminality, employment). Females show greater improvement, particularly beyond in-treatment change.

CO-MORBIDITY AMONG ADMISSIONS TO TCs

The objective of many studies during the past 10 years has been to classify substance abusers according to established psychiatric criteria. This has become possible because of the development of a nosological system to classify disturbances descriptively and the development of structured instruments to obtain the diagnoses. The most frequently used systems have been the Research Diagnostic Criteria (RDC) (Spitzer et al. 1975) and the DSM-III and -III-R (American Psychiatric Association 1980, 1987). The DSM-III is derived from the RDC, and the two systems are highly comparable (Rounsaville et al. 1980). The more commonly used instruments are the Schedule for Affective Disorders and Schizophrenia (SADS) (Spitzer and Endicott 1978-79) and the Diagnostic Interview Schedule (DIS) (Robins and Helzer 1985; Robins et al. 1988).

There have been almost no studies of the prevalence of psychiatric disorders among admissions to TCs. Most researchers have used the SADS on non-TC samples: a uniform finding has been that the majority of addicts seeking treatment received diagnoses other than substance abuse. Generally, there is a high incidence of affective disorders and antisocial personality (Rounsaville et al. 1985). One investigative team that utilized the DIS found that for alcohol abusers, a psychiatric disorder more often preceded alcohol abuse, while the reverse was true among drug abusers (Ross et al. 1988). The findings of a study that describes the incidence of psychiatric disorders among admissions to a large, urban TC (De Leon 1988a; Jainchill 1989) are described below.

Sample. The data were gathered on more than 350 admissions to treatment across a 3-year period (1985-87). The majority of the sample were male and black, with cocaine identified as the primary drug. There

was a disproportionate sampling of women to ensure a sufficient number for analyses; thus, 44 percent of the study cohort was female compared to 30 percent of the treatment population from which it was drawn. Additionally, the sample was older than the residential population, since the DIS is recommended for use with individuals at least 18 years of age. Therefore, all residential admittees under age 18 were excluded from the study.

Instrumentation. The DIS is a structured interview that can be administered by specially trained lay interviewers. The presence of symptoms is coded and nonpsychiatric causes, such as medical illness or drug/alcohol use, are distinguished from psychiatric attributions. A historical summary of psychiatric disturbance is obtained, in which age of onset and age of most recent occurrence are ascertained for each positive diagnosis. The DIS is structured so that diagnoses are computer generated. (For a more detailed description of the DIS, see Jainchill 1989.)

Admissions Profiles. Table 3 shows the incidence of psychiatric diagnoses obtained during the client's lifetime (ever) and during the month prior to interview (current). Eighty-two percent of the sample had a psychiatric (nondrug/alcohol) lifetime diagnosis, and more than 45 percent of the sample had a psychiatric disorder in the month prior to entering treatment. There were no significant differences among demographic and primary drug of abuse groups.

The distribution of separate lifetime DSM-III disorders is shown in table 4. The most commonly occurring nonsubstance diagnoses are in order of frequency: antisocial personality, psychosexual dysfunction, generalized anxiety, phobias, dysthymia, and major depression.

Demography and Primary Drug of Abuse. There were a number of gender differences in diagnoses. Proportionately more females had major depressive disorder, phobic disorders, and psychosexual dysfunction, while more males were diagnosed with antisocial personality. There were no ethnic differences on any of the psychiatric disorders. Among the primary drug groups, heroin abusers had a higher incidence of phobic disorders.

The distribution of substance use disorders reflected the self-reported primary drug groupings. The most frequently obtained diagnosis was cocaine abuse (79 percent), which was the most commonly reported

TABLE 3. *Current and lifetime diagnoses: Substance only, psychiatric only, and substance plus psychiatric*

	Lifetime Diagnoses		Current Diagnoses	
	Number	Percent	Number	Percent
Any diagnosis	349	97.21	286	79.67
Substance only	53	14.76	121	33.70
Psychiatric only	15	4.18	44	12.26
Substance plus psychiatric	281	78.27	121	33.70

KEY: $N = 359$

primary drug of abuse by the sample. However, the percentage with a cocaine abuse disorder exceeded the proportion who stated cocaine as their primary drug (79 percent versus 64 percent), indicating that some proportion of individuals had heavy cocaine use, although they did not consider it to be their main drug. This corroborates the finding that the majority of the sample were frequent users of more than one drug. Males and nonblacks revealed a significantly higher incidence of use of drugs other than cocaine. Clients who stated cocaine as their primary drug of use revealed a generally lower incidence of other drug use.

Psychiatric Status, Retention, and Progress in Treatment. Two groups, those who remained in treatment at least 3 months and those who dropped out prior to 3 months, were identified. The demographic and primary drug distributions were not different for the two groups, nor were there any differences in the distribution of the separate psychiatric disorders. The groups differed only with respect to the substance disorders: those in treatment less than 3 months had a higher percentage with a marijuana disorder, and more members of this group obtained combined abuse/dependence diagnoses.

Six variables that delineate dimensions of disturbance across all of the psychiatric disorders were computed. (For more information concerning methodology, see Jainchill 1989.) Those in the group with longer retention had higher (more severe) values for "number of psychiatric

TABLE 4. *Distribution of DSM-III diagnoses among admissions to residential drug treatment*

Diagnosis	Number	Percent
Organic brain syndrome		
Definitely mild	9	2.51
Could be severe, mild, or absent	5	1.39
Affective disorders		
Manic episode	7	1.96
Major depression	43	12.32
Dysthymia	59	16.91
Bipolar disorder	1	0.28
Atypical bipolar disorder	8	2.29
Schizophrenic disorders		
Schizophrenia	9	2.51
Schizophreniform	0	0.00
Anxiety disorders		
Obsessive compulsive disorder	19	5.32
Phobic disorders	99	27.73
Agoraphobia	57	15.97
Simple phobia	55	15.41
Social phobia	38	10.64
Panic disorder	9	2.51
Generalized anxiety	107	34.19
Other		
Antisocial personality	156	44.07
Somatization disorder	0	0.00
Anorexia	0	0.00
Pathological gambling	22	6.20
Psychosexual dysfunction	141	39.83
Bulimia	1	0.31
Posttraumatic stress	25	10.59
Ego dystonic homosexuality	5	2.14
Transsexualism	1	0.77

TABLE 4. *Distribution of DSM-III diagnoses among admissions to residential drug treatment (continued)*

Diagnosis	Number	Percent
Substance abuse/ dependence disorders		
Alcohol	141	39.28
Abuse	45	12.53
Dependence	13	3.62
Abuse + dependence	83	23.12
Barbiturates	51	14.21
Abuse	4	1.11
Dependence	22	6.13
Abuse + dependence	25	6.96
Opioids (heroin)	98	27.30
Abuse	3	0.84
Dependence	20	5.57
Abuse + dependence	75	20.89
Cocaine abuse	284	79.11
Amphetamines	36	10.03
Abuse	6	1.67
Dependence	16	4.46
Abuse + dependence	14	3.90
Hallucinogen abuse	32	8.91
Marijuana	143	39.83
Abuse	57	15.88
Dependence	34	9.47
Abuse + dependence	52	14.48

KEY: $N = 349$ to 359 for all but the following diagnoses:
 generalized anxiety, $N = 313$; bulimia, $N = 320$; posttraumatic
 stress, $N = 236$; ego dystonic homosexuality, $N = 234$;
 transsexualism, $N = 130$

NOTE: Cocaine and hallucinogens: DSM-III has no dependence
 diagnosis.

symptoms" and "number of lifetime diagnoses." A discriminant analysis was performed to assess whether the two groups could be further differentiated along psychiatric dimensions. A greater incidence of "lifetime diagnoses" and a higher score on "adult antisocial personality" (a factor reflecting antisocial personality symptoms with an adult onset) were positively associated with retention. Psychiatric disturbance alone, without an accompanying drug disorder, was negatively associated with retention. Thus, clients with longer retention tend to have more history of psychiatric disorder in addition to their substance abuse; however, psychiatric disturbance alone is negatively associated with retention.

A progress score was derived for individuals who remained in treatment at least 3 months. The score was based on a 90-day summary and monthly evaluations, both completed by clinical staff.

A regression analysis was performed to assess the relationship between client progress and adjustment to treatment and psychiatric status at admission. A high (favorable) progress score was associated with being black and manifesting less psychiatric disturbance at admission. "Childhood antisocial personality" (a factor reflecting symptoms with onset before age 15) was negatively associated with progress. Thus, clients whose deviant behavior begins early seem to have more trouble adjusting to treatment. This finding is discussed further in the following section.

IMPLICATIONS FOR TREATMENT AND RESEARCH

Substance abusers show features from both psychiatric and criminal populations. The profiles of treatment admissions appear to have worsened over a 10-year period, and the large majority (78 percent) are dually diagnosed (substance plus psychiatric disorders), although frank psychosis is the exception (De Leon 1988*a*, 1988*b*; Jainchill 1989; Jainchill and De Leon 1992).

In the literature on psychopathology and psychiatric disorders among substance abusers in settings other than the TC, the results generally are similar. There is some difference in the prevalence rates obtained from the TC sample reported above, compared with those shown by other investigators. In particular, Rounsaville and colleagues (1985) reported a lifetime incidence of major depression that was four times

the incidence shown in the aforementioned study, but the frequency of antisocial personality disorder was half that obtained (De Leon 1988a; Jainchill 1989).

However, other investigators (Ross et al. 1988) have shown very similar distributions to those obtained in the TC study. For example, Ross and colleagues reported that an almost identical percentage of clients yielded a lifetime psychiatric diagnosis, and the distribution of the specific disorders generally was comparable. Some of the variance in findings may be attributable to differences in the instruments that were used: Rounsaville and colleagues (1985) used the SADS, while Ross and coworkers (1988) used the DIS.

To further clarify the role of psychiatric symptomatology in drug abuse, investigators have attempted to delineate the symptom picture of specific disorders. For example, Rounsaville and colleagues (1985) described the profile of depression among opiate addicts. They found that most addicts reported having had a single episode that succeeded drug abuse, and there was a relatively infrequent occurrence of psychotic symptomatology and incapacitating symptom levels. In contrast, the depressive episodes of psychiatric populations yield a far more severe symptom picture.

Investigators, including Rounsaville and coworkers (1985), also have attempted to derive a typology of substance abusers along psychiatric dimensions. For example, three major subtypes of cocaine abusers have been hypothesized, with recommendations for different treatment strategies for each type (Weiss et al. 1986). These findings, although preliminary, highlight salient issues that should be addressed in future studies to clarify and improve the treatment and recovery process. The following points provide a focus for this work.

1. *The identification of psychiatric subtypes.* Aside from the aforementioned efforts to define subgroups of cocaine abusers, more general typologies are suggested. For example, individuals can be classified according to (1) those who are primarily drug abusers, with accompanying psychopathology; (2) those whose primary symptomatology is psychiatric, with accompanying drug abuse; (3) those for whom substance abuse and psychiatric disorders are equally present and interactive; and (4) those with a substance abuse disorder without psychiatric symptomatology. Distinguishing among these types is difficult, since the

relationship is obvious only with the most extreme examples in each group.

2. *The temporal relationship between substance abuse and other psychiatric disorders, in terms of onset or sequence, needs to be examined.* This includes elucidating the association among temporal order, psychiatric type, and symptom picture (i.e., does depression that precedes drug use present differently from episodes that succeed or are coincident with the drug problem?).
3. *The role of antisocial personality in the recovery process, in particular the differentiation of childhood and adult features, requires clarification.* Jainchill (1989) factor analyzed the symptom-items from the DIS for antisocial personality, and they subdivided into one factor characterized by childhood symptoms and a second factor identified by adult behaviors. There was a small negative relationship between the childhood factor and 3 months of retention, and this factor was negatively associated with progress in treatment. In contrast, the adult factor was positively associated with remaining in treatment for at least 3 months. However, the disorder, as obtained with the DIS, was not associated with either retention or progress. This finding suggests that the conventional DSM-III and -III-R criteria used to diagnose antisocial personality disorder may be inadequate.

The diagnostic utility of distinguishing among individuals with antisocial personality disorder, those who manifest a minimal number of childhood symptoms from those who have a large number of childhood symptoms, should be considered. An early onset of more deviant behaviors (childhood features) may be indicative of greater psychopathology, with implications for prognosis and treatment. For example, in the aforementioned study, clients with more childhood symptoms were less likely to remain in treatment, and those who did stay at least 3 months had more trouble adjusting. The latter fact could be associated with poorer long-term retention rates and remains an issue for future study.

4. *The impact of subcultural conditions on psychological disease and behavior must be clarified.* The degree of psychopathology manifested may be inversely related to how

much social pressure against addiction there is within the individual's social milieu. Two apparently identical diagnoses may reflect different syndromes, and, though criteria for a disorder may be met, it is important that the adaptive response be distinguished from the pathological condition. This issue has particular relevance for people of color and for women.

TCs are acknowledging the complexity of the problem of drug use. The TC model is being adapted to address the multivariate needs of drug-abusing clients who seek treatment. Staff members of most programs reflect an integration of traditional recovered counselors and individuals trained as mental health professionals. Further modifications to treatment procedures may involve special staff training, changes in recommended lengths of stay, the use of modified encounter groups, and the application of methods and concepts from the mental health system. Changes in structure and staffing may be needed to accommodate those clients who are admitted now, and perhaps to offer access to those who have been turned away in the past. Historically, TCs have been successful in working with individuals whose primary problem is drug abuse. The challenge is to adapt the model and methodology to meet the expanding needs of those seeking treatment, while retaining the self-help perspective and community dynamic.

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HIV and Therapeutic Communities

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INTRODUCTION

The epidemic of disease related to the human immunodeficiency virus type 1 (HIV-1, henceforth referred to as HIV) presents urgent challenges for therapeutic communities (TCs); however, TCs have great potential to slow the spread of HIV disease if they can negotiate these challenges successfully. Prevention and control of HIV infection in drug users involve multiple strategies, including enhanced entry into and retention in effective treatment programs for drug abuse, group education, individual counseling, voluntary HIV antibody testing, and medical treatment and other services for HIV-infected drug users.

After a discussion of the natural history and epidemiology of HIV disease in drug users, this chapter will focus on strategies in the control of the HIV epidemic that are relevant to TCs. These strategies are organized under the headings of primary, secondary, and tertiary prevention (figure 1). *Primary prevention* strategies are those that reduce HIV transmission. *Secondary prevention* strategies include early detection and prompt treatment of early HIV disease, and *tertiary prevention* strategies aim to reduce morbidity and mortality among persons with late-stage disease. Finally, the chapter will review the published literature in each of these areas and highlight research needs.

Epidemiology

Knowledge has developed rapidly regarding the epidemiology, methods of transmission, and natural history of HIV infection (Mathews et al. 1990). HIV infection and acquired immunodeficiency syndrome (AIDS) are phases of a chronic disease, referred to as HIV disease. A diagnosis of AIDS is made on the basis of indicator conditions, including opportunistic infections and neoplasms. The revision of the AIDS case definition to include persons with a CD4+ T-cell count of less than 200/ μ L will increase the number of HIV-infected persons meeting the AIDS case definition (Centers for Disease Control 1993). This new definition will lead to an estimated 50-percent increase in the number of persons recognized as living with AIDS and perhaps a much greater increase among injection drug users (IDUs) (Des Jarlais et al. 1992).

Primary Prevention

- Access to drug treatment of high-risk drug users
- Retention in drug treatment of high-risk drug users
- HIV education and counseling

Secondary Prevention

- HIV antibody testing
- Contact notification
- Early medical treatment
- Coordination with community services

Tertiary Prevention

- Medical treatment of advanced disease
- Palliative and terminal care
- Coordination with community services

FIGURE 1. *Levels of prevention of HIV disease among drug users*

However, populations with poorer access to care, including drug users, may be less likely to be identified as having AIDS than populations with better access (Chang et al. 1992).

During the early period of disease, HIV-infected persons mainly are asymptomatic. The median incubation period between initial infection and development of AIDS is estimated to be at least 8 to 10 years. Treatments that lengthen the incubation period will significantly affect the need for care and medical surveillance of persons with HIV disease. Survival after a diagnosis of AIDS usually is short, particularly among IDUs (Harris 1990).

A diagnosis of AIDS, while essential for epidemiological surveillance, is of limited use for management and intervention programs, as it excludes a substantial amount of severe HIV disease. It is particularly inadequate when applied to drug users, who have been shown to experience a substantial HIV-related excess morbidity and mortality not included in the current AIDS case definition (Mientjes et al. 1992; Stoneburner et al.

1988). Therefore, it is more appropriate to refer to different stages in the natural history of HIV disease as early or advanced HIV disease.

Substance users are recognized to be at high risk of HIV disease, primarily through drug injection with nonsterile injection equipment but also through risky sexual practices that tend to be associated with drug and alcohol use (Minkoff et al. 1990; Rolfs et al. 1990; Schoenbaum et al. 1989; Sterk 1988). Some investigators have found the prevalence of these risky behaviors to be lower in drug users entering treatment than among nondrug treatment samples (Lampinen et al. 1992; McCusker et al. 1990, 1992a). However, a substantial percentage of those entering treatment report drug injection or sexual behaviors that place them and their needle sharing and sexual partners at risk.

Incidence and prevalence rates of HIV and AIDS reflect not only the above risk behaviors but also the prevalence of HIV in the social networks within which drug users share injection equipment and make sexual contacts. Thus, the prevalence of HIV among IDUs entering treatment varies widely by geographic area, with higher prevalence rates found in populations closer to the HIV epicenters of New York and New Jersey (Hahn et al. 1989; Lange et al. 1988). Other variables associated with an increased HIV risk include race or ethnicity (Chaisson et al. 1987; Koblin et al. 1990; Schoenbaum et al. 1989; Williams 1990). Use of cocaine, particularly "crack" cocaine, also has been found to be associated with increased HIV risk, presumably due to the association of cocaine use with riskier sexual practices (Chaisson et al. 1991).

PRIMARY PREVENTION

TCs can effect primary prevention by admitting high-risk drug abusers into treatment and by retaining those clients long enough to treat the primary drug abuse problem effectively. Thus, the treatment program itself reduces HIV transmission through increasing abstinence from high-risk drug use. For those clients who do not complete the program successfully or who relapse after completion, TCs can prepare them for safer relapse through specific educational and other interventions (Baker et al. 1993).

Sexual risk reduction must be emphasized in addition to reduction of the risks associated with drug use (Schoenbaum et al. 1989). A number of studies have suggested that sexual risk reduction is more difficult to

achieve among drug users than reduction in risky drug use behaviors (Lewis and Watters 1991; Lewis et al. 1990; Magura et al. 1990; McCusker et al. 1993a).

Access and Admission

Outreach and admission policies and procedures need to be considered if TCs are to attract persons at high risk for HIV. Although it is well known that substantial numbers of impaired drug users fail to seek treatment (Rounsaville and Kleber 1985), it also is important to know the extent to which drug users who are at risk of HIV infection or already infected are entering treatment. Followup of IDUs who received HIV counseling and testing at community sites and in prison in central Massachusetts indicated that a longer history of drug injection, more frequent injection, bleach use, prior drug treatment, and a positive test result were associated with admission to drug treatment (McCusker et al. 1994a).

Limited research has compared the characteristics of clients admitted to TCs with those in other treatment programs and with those not in treatment. In central Massachusetts, IDUs entering drug treatment were more likely to be better educated, white, and male than those contacted at nontreatment sites (McCusker et al. 1990). Even after controlling for these demographic variables, clients entering treatment reported less risky drug injection and sexual behaviors than those not in treatment. Alcabes and colleagues (1992) found that clients in treatment were more likely to be female, older, white, and have longer injection histories. Other treatment programs need to assess whether they are admitting lower risk subpopulations of drug users.

Women may have special problems in accessing treatment, particularly those who are pregnant or have child care problems (De Leon and Jainchill 1991). Black and lower socioeconomic status women may be the least likely to access treatment and may do so only after exhausting informal resources (Marsh and Miller 1985).

Several studies have found that treatment programs have less success in attracting younger drug users as well as those who have initiated use more recently (Fraser and Leighton 1984; Love and Gossop 1985). Thus, an important window of opportunity to intervene may be lost. Vlahov and colleagues (1990) suggest that recent IDUs may be at particularly high risk of HIV infection.

The characteristics of clients entering treatment differ from one TC to another, depending on regional demographics and on the program's image. These characteristics also may change over time. Among IDUs entering drug abuse treatment, the proportion of needle sharing has declined (Guydish et al. 1990; McCusker et al. 1992*a*; Sorensen et al. 1989*c*), and the proportion of needle sharers using bleach has increased (McCusker et al. 1992*a*).

Can treatment programs coordinate successfully with outreach programs that target subpopulations of drug users for priority admission? Three studies indicate that this is possible. In New Jersey and California, the distribution of coupons for free detoxification brought many high-risk drug users into treatment (Jackson et al. 1990; Sorensen et al. 1993). In Worcester, Massachusetts, drug abuse treatment programs have arranged to give priority for admission to persons who test positive in a coordinated, community-based HIV antibody testing program (Centers for Disease Control 1989; McCusker et al. 1994*a*).

Some policy issues that need to be addressed include the question of which subpopulations of drug users should be targeted for admission to treatment—those at high risk who have not been infected or those already infected? In communities with low HIV prevalence rates, it may be very wise to admit HIV-infected drug users preferentially as a way to reduce the risks of HIV transmission to other users. In communities with very high rates of HIV infection, the opposite policy might be more effective: isolate the uninfected from high-risk situations by getting them into treatment. From a public health viewpoint, it may be most beneficial to treat those who are important in the heterosexual transmission of HIV (Holmes et al. 1990). These individuals may tend to be young, inner-city residents who are involved in the exchange of sex for money or drugs. In particular, efforts should be directed toward innovative methods of attracting ethnic minorities into treatment (Schilling et al. 1989*a*).

Retention and Outcomes

Methadone maintenance programs have been studied extensively, and they appear to be effective in reducing intravenous drug use (Ball et al. 1988; Cooper 1989). However, there is marked variation between programs concerning the reduction of intravenous drug use and needle sharing. Abdul-Quader and colleagues (1987) found that clients who stayed longer in methadone maintenance reported lower frequencies of drug behaviors related to HIV transmission but similar sexual behaviors.

In contrast, the effectiveness of TCs in achieving HIV risk reduction has received little study.

As with other treatment modalities, a longer stay in TC treatment is associated with a better outcome (De Leon 1984), and only stays of at least 6 months appear to be associated with a major impact on drug use (Hubbard et al. 1988). These conclusions are based on nonexperimental studies, however, and may be explained by selection bias: drug users with a better prognosis may be retained longer in treatment programs. Research is needed on the relative effectiveness of shorter treatment programs, which might allow a larger number of clients to receive services (Lewis et al. 1993). Preliminary results from two randomized trials of alternative residential treatment models (6- versus 12-month TC programs and 3- versus 6-month relapse prevention residential programs) do not indicate program length effects on psychosocial variables at the time of exit from the program (McCusker et al. 1994*b*) or on rates of drug use or HIV risk behaviors at followup within 6 months of exit (McCusker et al. 1994*c*, 1994*d*).

The highest attrition rates from TCs occur in the first crucial weeks of treatment (De Leon and Schwartz 1984), and attrition at this early stage of recovery is highly likely to be associated with relapse to high-risk behavior. Research is needed on how TCs can prevent high-risk relapse among these "treatment failures." It has been noted that in order to maintain high-risk IDUs in treatment, methadone maintenance programs may have to reconsider their policies for discontinuation of clients who do not comply with requirements for complete abstinence (Batki 1988). Should TCs also reconsider their policies and assess the effects of policy changes upon the integrity of the TC?

The associations of HIV status and risky injection behavior with measures of motivation and readiness for treatment around the time of admission have been investigated in two New England TCs (McCusker et al. 1994*e*). HIV-infected clients appeared to be more motivated than others, even in multivariable analyses, while riskier behavior had little effect upon these measures. Studies of the effects of HIV status and risky behavior on retention and outcomes also are needed. Two studies in other treatment settings (methadone maintenance and detoxification) found that HIV status was not associated with retention (McCusker et al. 1992*b*; Weddington et al. 1991).

The effects of TCs upon HIV-relevant behaviors, as well as the more customary measures of drug addiction, need to be investigated. In one observational study, clients who were transferred to TCs after detoxification were less likely to inject drugs at followup compared with similar clients who were transferred to outpatient treatment or received no further treatment (McCusker et al., *in press-a*). These results might be explained by selection bias, and experimental designs are needed to address these questions.

HIV Education

Small-group HIV educational programs for drug users have been developed in a variety of treatment settings: detoxification programs (Dengelegi et al. 1990; Gibson et al. 1989, 1990; Heitzmann et al. 1989; McCusker et al. 1992*b*, *in press-c*; Sorensen et al. 1990); methadone maintenance programs (Calsyn et al. 1992; Magura et al. 1989, 1991; Schilling et al. 1989*b*; Sorensen et al. 1988, 1989*a*); and TCs (Lewis et al. 1993; Sorensen et al. 1988, 1989*b*). More limited research has been reported on individual counseling interventions (Baker et al. 1993). The setting is probably at least as influential upon outcomes as the HIV educational program itself, and TCs cannot necessarily adapt apparently successful programs from other settings (Sorrell and Elion 1989). TCs have the luxury of a captive audience for a longer period of time than most other settings, and the challenge is to use this opportunity to its greatest effect. However, in conducting educational programs in TCs, one objection is the idea that HIV education that prepares residents for safe relapse can undermine the abstinence message of TCs (Sorensen et al. 1991, p. 111).

The principles of health education and the theoretical models that have been shown to be effective in other settings need to be applied to TCs (Leviton 1989). Factual knowledge of HIV is not enough in itself for behavior change (Spencer 1988). Attitudes and beliefs need to be changed (Jang et al. 1990; Millson et al. 1990), specific skills learned, and social norms altered (Des Jarlais and Friedman 1988; Sorensen 1990). Interventions based on altering social norms would appear to be particularly relevant to TCs, which utilize the healing role of the community.

One study of the effectiveness of HIV educational programs for drug users in detoxification found evidence of increases in knowledge and determination to stop drug use but also denial in appraising the risk of

personal behaviors (Dengelegi et al. 1990). This same study found overall risk reduction among program participants at followup. However, in other studies that have applied experimental designs, the differences between intervention and control conditions or between standard and enhanced educational models diminish considerably based on the limited followup data available so far (Chitwood et al. 1990; Gibson et al. 1990; McCusker et al. 1993*b*; Sorensen et al. 1990). Most studies indicate improved knowledge, attitudes, intentions, or skills rather than changed behavior (Sorensen 1991). However, McCusker and colleagues (1993*b*) found that while an enhanced intervention was more effective than a shorter, informational intervention for lower risk drug users, the opposite was true for IDUs with the most risky behaviors. Further research is needed to determine which types of interventions are most effective with which subgroups of drug users. Personality characteristics of high-risk IDUs may make them more resistant to standard educational approaches (Brooner et al. 1990, 1993).

Negative or inconsistent outcomes of health education programs are not unique to HIV education. It is unrealistic to expect more than small, incremental improvements in behavior to result from interventions that last only a few hours, particularly when they are set in the context of powerful treatment programs. Carefully controlled experimental designs are needed to determine the independent effects of educational programs.

More fundamental changes may need to occur in TCs for greater and more lasting effects. As an example of this approach, a health education and relapse prevention program has been developed in a former TC. Two versions of this program, lasting 3 months and 6 months, currently are being compared with a more traditional TC. HIV-related behavioral outcomes are being assessed as well as more conventional measures of drug use (Lewis et al. 1993).

SECONDARY PREVENTION

The rationale for secondary prevention strategies is that early detection and prompt treatment will reduce the morbidity and mortality associated with HIV disease. There is some evidence that early treatment can increase the incubation period of HIV disease (Harris 1990; Lagakos et al. 1991). This motivates efforts to identify asymptomatic HIV-infected persons and to link them with primary care services.

HIV antibody screening, partner notification, and antiviral chemotherapy are interventions that achieve the objectives of secondary prevention. If HIV screening and treatment are accompanied by a reduction in high-risk behavior or if treatment reduces infectivity, secondary prevention also may contribute to primary prevention.

HIV Antibody Testing

HIV antibody testing of IDUs has been debated as an adjunct to other prevention strategies (Hawthorne and Siegel 1988; Stimmel 1987). Although Public Health Service guidelines recommend that all IDUs be routinely counseled and tested (Centers for Disease Control 1988), there is great variability in testing policies among drug abuse treatment programs.

In one survey of TC clients, most indicated that they wished to be tested for HIV (Lewis and Galea 1986). In a survey of clients and staff of four methadone maintenance clinics in New York City, the majority thought that voluntary HIV testing should be available and that the results should be provided to the client's physician (Curtis et al. 1989). High participation in an onsite testing program (85 percent) has been reported from a methadone maintenance program in Minnesota. This rate was attributed to an awareness of high rates of HIV infection in IDUs, the voluntary nature of the program, and an indifference to the possible negative consequences of testing (Carlson and McClellan 1987). Weddington and Brown (1988) reported on the almost unanimous acceptance of HIV testing by persons enrolled in an efficacy study of outpatient treatment for cocaine abuse in Baltimore. In Connecticut, 72 percent of the clients of methadone maintenance programs who received pretest counseling agreed to be tested, and 87 percent of these actually had blood drawn (Cartter et al. 1990).

The factors associated with the decision to be tested for HIV have differed among studies. In a detoxification program in Massachusetts, those who chose to be tested reported higher risk drug and sexual behaviors and perceived themselves as more likely to have been infected than those not tested (McCusker et al., *in press-b*). These results are consistent with those found in a prison testing program (Andrus et al. 1989); however, this may not always be the case. In a study of voluntary versus anonymous testing in a sexually transmitted disease (STD) clinic, the seroprevalence rate among men who refused testing was over five

times greater than that among those who tested voluntarily (Hull et al. 1988).

In a study of HIV testing in a methadone maintenance clinic, clients who were older, married, and planning to have children were tested more frequently. The perceived support of the counselor also contributed to the decision to be tested (Magura et al. 1990). Those clients who declined to be tested were concerned about breaches of confidentiality and doubted the value of testing. Assurances of confidentiality or anonymity are important prerequisites for testing (Kegeles et al. 1990). However, confidentiality may be difficult to maintain in a TC. Despite efforts to maintain confidentiality, the emotional impact of a positive test result would be difficult to hide in the close observation and often intense encounter group sessions of TCs (Des Jarlais and Friedman 1986).

Limited information is available on the possible adverse effects of testing IDUs (Clark and Washburn 1988). Casadonte and colleagues (1990) followed 50 IDUs from before HIV testing to 8 to 10 weeks later and observed no major stress reactions. Seropositive clients experienced more anxiety 1 to 2 weeks after learning results. However, this anxiety gradually diminished, and they made important behavioral changes that were maintained.

Studies to date indicate minimal evidence that HIV testing is related to risk reduction (Higgins et al. 1991; McCusker et al., in press-c; Power et al. 1988). The behavioral outcomes of IDUs from a program that combined AIDS education with voluntary HIV testing did not differ from those of a wait-list control group (Calsyn et al. 1992). Seropositive IDUs in a Scottish general practice were reported to reduce their frequency of injection to a greater extent than seronegative IDUs, but this was due to higher initial frequency in the former (Robertson et al. 1988). Female seropositive IDUs in Amsterdam reported safer sexual practices than seronegative IDUs (van den Hoek et al. 1990). However, among pregnant IDUs informed of their status before 24 weeks of gestation, Selwyn and colleagues (1989a) found very little difference between HIV-infected and uninfected women regarding their decision to terminate pregnancy.

Studies are needed that compare the effectiveness of different policies on HIV antibody testing in TCs. Does testing provide additional motivation to complete the TC program or does it precipitate attrition? Would routine HIV testing discourage potential clients from entering the TC?

Contact Notification

In TCs where HIV testing is offered, the issue arises of whether, how, and when to notify needle sharing or sexual contacts of persons who test positive. One study indicated that routine notification of needle sharing or sexual partners would differentially discourage HIV-infected IDUs from entering drug treatment (Rubin et al. 1991). De Philippis and colleagues (1992) found that the majority of clients in a methadone program favored contact tracing. Research on this issue in TCs is needed.

Early Treatment

Early in the HIV epidemic, the care of persons with HIV was primarily the domain of specialist units, particularly departments of infectious disease. With recent improvements in treatment and standardization of management protocols, HIV disease has become a "primary care disease with specialists and experts available to help manage complications" (Fineberg 1989). However, this transition is problematic for those HIV-infected groups whose primary care needs clearly have not been met prior to infection, notably IDUs. Zidovudine appears to be effective in reducing the rate of progression to AIDS among various groups with early HIV disease, including IDUs (Lagakos et al. 1991). Improved survival of AIDS patients initially diagnosed with *Pneumocystis carinii* pneumonia also has been reported among IDUs, which may be attributable in part to better diagnosis and treatment (Harris 1990).

Persons with early HIV disease, along with uninfected persons whose behavior places them at risk of HIV, ordinarily are managed in primary care settings, but they may need special programs or personnel or short-term admission to hospitals for specialized procedures and investigations (Kanouse et al. 1989). The services needed include staging and monitoring or referral to these services. Specific treatments that may be indicated include antiviral drugs (mainly zidovudine) and prophylaxis against *Pneumocystis carinii* pneumonia (Wartenberg 1991).

Following discharge from the TC, continuity of primary care is essential for persons with HIV disease. Provision of primary care for IDUs presents additional challenges because this population is at risk for a variety of other acute and chronic conditions, such as tuberculosis, STDs, and psychiatric problems. The limited research on primary care for IDUs indicates substantial gaps and barriers. IDUs often are indigent and inadequately insured. The great majority of IDUs do not receive primary

care in the private sector but in public hospitals and clinics and community health centers (Evans 1990). For many IDUs, the usual source of care is the emergency room (Solomon et al. 1990).

Service providers often have negative attitudes toward drug users and their families that reinforce resistant behaviors (Shulman et al. 1990). Problems such as social instability, frequent lack of suitable family members or friends who can assist with care, and continued drug use make IDUs difficult to deal with in both institutional and ambulatory settings.

A survey of 15 TCs by Des Jarlais and colleagues (1986) found a lack of consensus on admission policies for persons with HIV disease. Current policies need to be reassessed and empirical evidence gathered to compare outcomes for TCs with different admission policies. Both the effects of clients with HIV disease upon the TC and the effects of the TC upon HIV-infected clients need to be examined. While there is no evidence to date that continued drug injection has an adverse effect on the progression of HIV disease (Margolick et al. 1992), further research is needed on the effects of TCs on the natural history of HIV.

Several research issues are relevant to TCs. Should clients with early HIV disease continue to be part of the TC or be transferred elsewhere? If they remain in the TC, how much, if any, of their primary care needs can be met within the medical services provided at the TC rather than in the outside community? What is the role of case management or case coordination? Finally, careful collaborative arrangements may be needed with medical centers.

Opportunities also may be available for involvement in clinical trials of new modalities for treatment of HIV, which offer state-of-the-art assessment and treatment. It is important for IDUs to participate in these trials so that the results can be generalized to this population. However, it has been difficult to obtain access to trials or compliance with trial protocols among IDUs (Craven et al. 1990). Do TCs have a responsibility to try to involve their clients in this type of research?

TERTIARY PREVENTION

The onset of advanced HIV disease is heralded by an acute infection or tumor or the development of wasting syndrome or dementia. Periods of

severe illness, often requiring hospitalization, may alternate with periods of minimal symptoms and normal functioning. The aim of tertiary prevention is to provide continuing support and care to individuals with advanced HIV disease in order to reduce mortality and improve quality of life.

Primary care services are needed as in the earlier stages of HIV, and previous remarks about access to and coordination of services are equally applicable to tertiary prevention (Benjamin 1989). Treating people with HIV disease in drug abuse treatment programs raises many problems, but there is a compelling need that will grow as HIV disease advances in those IDUs who are infected. Provision of primary medical care in the context of drug abuse treatment has been conducted in a few methadone maintenance programs (e.g., Batki et al. 1990; Selwyn et al. 1989b), but information also is needed on how TCs are responding to the increasing burden of advanced HIV disease. Residential programs recently have begun to address the special problems of treating HIV-infected clients (Galea et al. 1988a, 1988b; Goldstein and Yuen 1988; Robak and Caffrey 1988).

The availability of intermediate and long-term facilities for persons with advanced HIV disease who are too ill to live at home but not terminally ill is grossly inadequate (Taravella 1988), and the problem is exacerbated for IDUs (Weinberg and Murray 1987). In New Jersey, four TCs participated in a pilot posthospital residential program for homeless drug users with symptomatic HIV disease (Jackson et al. 1990). However, some problems were encountered with programs that were unwilling to modify their concepts and practices.

Des Jarlais and colleagues (1986) suggested that specialized TCs are needed for HIV-infected drug abusers. In New York, Samaritan Village has developed a TC within a long-term care facility providing round-the-clock nursing and primary care: H.E.L.P./Project Samaritan, Inc., which opened in October 1990 (Barton 1992). Residents are former substance users with AIDS or an opportunistic disease; they must be motivated and willing to participate as members of a mutually supportive, drug-free TC. Initial evaluation of this innovative project indicates that more than half of the residents stay for 6 to 15 months.

Further research is needed on models for meeting the medical and nursing needs of former substance users with advanced HIV disease within the TC framework. Should TCs continue to treat residents in the terminal

stages of HIV disease, and when should sick residents be transferred to the hospital or to hospice programs (Bulkín et al. 1988)? Is the presence of persons with advanced HIV disease a source of motivation for uninfected clients to complete treatment? Some of the traditional TC approaches, such as confrontation, may be difficult to enforce with sick residents. Batki and London (in press) contend that residential programs will need to increase their flexibility and lower their thresholds for admission of HIV-infected clients.

RECOMMENDATIONS FOR RESEARCH

The high-priority research questions related to HIV and TCs include the following:

1. Are TCs attracting drug users who are at high risk for HIV or already infected, and how can these admission rates be improved through outreach and coordination with community programs?
2. What are the retention rates and outcomes of TCs for persons with or at high risk of HIV, what are the effects of TCs upon HIV risk behaviors, and how can these be improved?
3. Which HIV educational interventions offered to TC clients are more effective with which subgroups of HIV clients?
4. How can HIV counseling and testing programs be integrated into TCs, and what are the effects of these programs upon retention rates and outcomes of treatment?
5. Should TCs assist with contact notification for HIV-infected clients, and what effects might such activities have on admission, retention, and participation in HIV counseling and testing programs?
6. How can TCs best provide medical and other services to HIV-infected clients, and what effects do such services have on the rates of progression to AIDS and survival?
7. What modifications, if any, should TCs make to accommodate clients with HIV disease, and what effects do such modifications have on clients with and without HIV disease?

CONCLUSIONS

This chapter has reviewed the HIV-related issues that confront TCs. At this early stage, there are more questions than answers. There are some highly charged issues that need to be worked through before TCs can turn their full force to bear on managing the HIV epidemic. The ability of TCs to respond to the many challenges of the HIV epidemic will depend on many factors, including size, budget, location, and structure (Marco 1989). The attitudes and training of staff will be a key determinant of success (Galea et al. 1988a). Knowledge of what does and does not work is at an early stage. Greater coordination among TCs and standardization and documentation of different approaches are needed.

In summary, HIV disease is a chronic problem with a substantial incubation period. As HIV advances among hundreds of thousands of drug users who already are infected, they will be in need of residential care. TCs will have an increasingly important role to play, if the difficult issues can be worked out now.

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Therapeutic Communities in Corrections and Work Release: Some Clinical and Policy Considerations

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INTRODUCTION

The primary task of prisons, despite any arguments to the contrary, is custody. The internal order of the prison is maintained by strictly controlling the inmates and regimenting every aspect of their lives. In addition to their loss of freedom and basic liberties, goods and services, heterosexual relationships, and autonomy, they are deprived of their personal identities. Upon entering prison, inmates are stripped of their clothing and most of their personal possessions; they are examined, inspected, weighed, documented, classified, and given a number. Thus, prison becomes painful both physically and psychologically (Clemmer 1958; Sykes 1965).

The rigors and frustrations of confinement leave but a few paths open to inmates. They can bind themselves to their fellow captives in ties of mutual aid and loyalty, in opposition to prison officials. They can wage a war against all, seeking their own advantage without reference to the needs and claims of others, or they can simply withdraw into themselves. Ideally these alternatives exist only in an abstract sense, and most inmates combine characteristics of the first two extremes. Within this balance of extremes, an inmate social system emerges and functions, and one of the fundamental elements of this social system is the prison subculture.

Every correctional facility has its subculture, and every prison subculture has its system of norms that influence prisoners' behavior, typically to a far greater extent than the institution's formally prescribed rules. These subcultural norms are informal and unwritten rules, but their violation can evoke sanctions from fellow inmates ranging from simple ostracism to physical violence and death. Many of these rules revolve around relations among inmates and interactions with prison staff, while others reflect preoccupations with being smart, tough, and streetwise. As such,

this prison code often tends to militate against reform in general and drug rehabilitation in particular.

In addition, there are many other phenomena in the prison environment that make rehabilitation difficult. Not surprisingly, the availability of drugs in prisons is a pervasive problem. Moreover, in addition to the one-on-one violence that seems to be a concomitant of prison life, there is the violence associated with inmate gangs. These gangs often are formed along racial lines for the purposes of establishing and maintaining status, turf, and unofficial control over certain sectors of the penitentiary.

Within this kind of a setting, it would appear that if any drug rehabilitation approach had a chance of succeeding, it would be the therapeutic community (TC). The TC is a total treatment environment that is isolated from the rest of the prison population—separated from the drugs, the violence, and the norms and values that rebuff attempts at rehabilitation.

THE STAGING OF CORRECTIONS-BASED TC TREATMENT

Based on prior experience with correctional systems and populations, with corrections-based drug treatment, and with the evaluation of a variety of correctional programs, it would appear that the most appropriate strategy for effective TC intervention with inmates would involve a three-stage process. Each stage in this regimen of treatment would correspond to the inmate's changing correctional status—incarceration, work release, and parole (or whatever other form of community-based correction operates in a given jurisdiction).

Primary TC Treatment

The *primary stage* should consist of a prison-based TC designed to facilitate personal growth through the modification of deviant lifestyles and behavior patterns. When inmates are segregated from the rest of the penitentiary, their recovery from drug abuse and development of prosocial values in the prison TC involve essentially the same mechanisms seen in community-based TCs.

As in other TCs, therapy in this primary stage should be an ongoing and evolving process. Ideally, it should endure for 9 to 12 months, with the potential for the resident to remain longer, if necessary. As such, recruits

for the TC should be within 18 months of their work release date at the time of treatment entry.

It is important that TC treatment for inmates begin *while they are still in the institution*, for a number of reasons. In a prison situation, time is one of the few resources that most inmates have in abundance. The competing demands of family, work, and the neighborhood peer group are absent. Thus, there is the time and opportunity for comprehensive treatment—perhaps for the first time in a drug offender's career. In addition, there are other new opportunities presented—to interact with "recovering addict" role models; to acquire prosocial values and a positive work ethic; and to initiate a process of education, training, and understanding of the addiction cycle.

Secondary TC Treatment

Since the 1970s, work release has become a widespread correctional practice for felony offenders. It is a form of partial incarceration whereby inmates are permitted to work for pay in the community, but they must spend their nonworking hours either in the institution or, more commonly, in a community-based work release facility or halfway house. Inmates qualified for work release are those approaching their parole eligibility or conditional release dates. Although graduated release of this sort carries the potential for *easing* an inmate's process of community reintegration, there is a negative side, especially for those whose drug involvement served as the key to the penitentiary gate in the first place.

This initial freedom exposes many inmates to groups and behaviors that easily can lead them back to substance abuse, criminal activities, and reincarceration. Even those receiving intensive TC treatment while in the institution face the prospect of their recovery breaking down. Work release environments in most jurisdictions do little to stem the process of relapse. Since work release populations mirror the institutional populations from which they came, there are still the negative values of the prison culture. In addition, street drugs and street norms tend to abound.

Graduates of prison-based TCs are at a special disadvantage in a traditional work release center since they must live and interact in what typically is an antisocial, nonproductive setting. Without clinical management and proper supervision, their recovery can be severely threatened. Thus, secondary TC treatment is warranted. This *secondary*

stage is a "transitional TC"—the TC work release center or TC halfway house.

The program composition of the work release TC should be similar to that of the traditional TC. There should be the "family setting," which is removed from as many of the external negative influences of the street and inmate cultures as is possible. There also should be the hierarchical system of ranks and job functions, the rules and regulations of the environment, and the complex of therapeutic techniques designed to continue the process of resocialization. However, the clinical regimen in the work release TC must be modified to address the correctional mandate of "work release."

Tertiary TC Treatment

In the *tertiary stage*, clients will have completed work release and will be living in the community under the supervision of parole or some other surveillance program. Treatment intervention in this stage should involve outpatient counseling and group therapy. Clients should be encouraged to return to the work release TC for refresher or reinforcement sessions, to attend weekly groups, to call on their counselors on a regular basis, and to participate in monthly one-on-one or family sessions. They also should be required to spend 1 day each month at the program and to attend a weekend retreat every 3 months.

CREST OUTREACH CENTER

During the closing months of 1990, the Center for Alcohol and Drug Studies at the University of Delaware was awarded a 5-year National Institute on Drug Abuse (NIDA) treatment demonstration grant to establish a work release TC. Known as CREST Outreach Center, the authors believe that it represents the first dedicated work release TC in the Nation, and it has been designed to incorporate the three-stage treatment process just described. Such a staging process is possible since a prison-based TC already exists in Delaware.

The treatment regimen at CREST Outreach Center follows a five-phase model over a 6-month period. *Phase One* is composed of entry, assessment and evaluation, and orientation, and it lasts approximately 2 weeks. New residents are introduced to the house rules and schedules by older residents. Each new resident also is assigned a primary

counselor who initiates an individual needs assessment. Participation in group therapy is limited during this initial phase so that new residents can become familiarized with the norms and procedures at CREST.

Phase Two emphasizes involvement in the TC community, including such activities as morning meetings, group therapy, one-on-one interaction, confrontation of other residents who are not motivated toward recovery, and nurturance of the newer people in the environment. During this phase, residents begin to address their own issues related to drug abuse and criminal activity during both group sessions and one-on-one interactions. Also, they begin to take responsibility for their own behaviors by being held accountable for their attitudes and actions in group settings and in informal interactions with residents and staff. Residents are assigned job functions aimed at assuming responsibility and learning acceptable work habits, and they continue to meet with their primary counselors for individual sessions. However, the primary emphasis in Phase Two is on becoming an active community member through participating in group therapy and fulfilling job responsibilities necessary to facility operations. This phase lasts approximately 8 weeks.

Phase Three continues the elements of Phase Two and stresses role-modeling and overseeing the working of the community on a daily basis (with the support and supervision of the clinical staff). During this phase, residents are expected to assume responsibility for themselves and to hold themselves accountable for their attitudes and behaviors. Frequently, residents in this phase will confront each other in group settings. They assume additional job responsibilities by moving into supervisory positions, thus enabling them to serve as positive role models for newer residents. They continue to have individual counseling sessions, and in group sessions they are expected to help facilitate the group process. Phase Three lasts for approximately 5 weeks.

Phase Four initiates preparation for gainful employment, including participating in mock interviews, attending seminars on job-seeking, making the best appearance when seeing a potential employer, developing relationships with community agencies, and looking for ways to further educational or vocational abilities. This phase focuses on preparing for reentry to the community and lasts approximately 2 weeks. Residents continue to participate in both group and individual therapy and to be responsible for their jobs in the CREST facility. However, additional seminars and group sessions are introduced to address issues

related to finding and maintaining employment and housing as well as returning to the community environment.

Phase Five involves reentry, that is, becoming gainfully employed in the outside community while continuing to live in the work release facility and serving as a role model for those at earlier stages of treatment. This phase focuses on balancing work and treatment. As such, both becoming employed and maintaining a job are integral aspects of the TC work release program. During this phase, residents continue to participate in program activities, such as seminars and social events. They also participate in group sessions that address issues of employment and continuing treatment after leaving CREST. In addition, residents begin to prepare to leave CREST. They open a bank account and begin to budget for housing, food, and utilities. Seven weeks into Phase Five, representing a total of 26 weeks at CREST Outreach Center, residents have completed their work release commitment and are free to live and work in the community as program graduates.

Throughout the program process, residents in different stages of their recovery regularly interact with one another. The CREST Outreach Center community is comprised of both women and men at a variety of stages of treatment. Through this interaction, newer residents are given hope and encouragement for changing their lifestyles, and the older residents can assess their own changes and become positive role models. Moreover, beginning in Phase Two, residents are encouraged to engage family and significant others in the treatment process through family and couples groups led by CREST counselors.

In all phases of treatment at CREST, urine is monitored on a regular but unscheduled basis. Since urine monitoring is an aspect of standard Department of Correction (DOC) work release procedure, sanctions for urines testing positive for illicit and nonprescribed drugs are imposed by DOC staff following DOC guidelines. Typically, positive urines on more than two occasions can result in cancellation of work release and return to the institution. However, although *all* work release participants are under the supervision and custody of Delaware DOC, CREST Outreach Center is operated by University of Delaware personnel. The only correctional presence at CREST is a periodic walk-through by a single correction officer.

All CREST graduates are urged to return to the facility periodically to participate in the groups, one-on-one interactions, family sessions, and retreats that represent stage three of prison-based TC treatment.

RESEARCH AND TREATMENT IMPLICATIONS

Since CREST Outreach Center was established as part of a NIDA treatment demonstration grant, the opportunity exists to evaluate the clinical efficacy of alternative models of the TC work release concept. Over the 5-year grant period, CREST will serve 360 inmates; 260 of these will be selected from the general prison population eligible for work release. Over this same period of time, 100 residents of the *Key*, Delaware's prison-based TC, will be placed in the TC work release program, providing a transitional placement for these individuals.¹ Results for each of these groups will be compared to a control group of 260 residents of the existing work release centers—Plummer Center in Wilmington and Sussex Work Release in lower Delaware. Subject selection into the treatment and control groups is random and compatible with the DOC's current process for placement into work release. The study population will be 20 percent female and 80 percent male, with an ethnicity makeup reflecting that of the general institutional population.

All 620 subjects will receive human immunodeficiency virus (HIV) and urine testing immediately prior to work release, assessments of drug use and HIV risk behavior histories, and intensive acquired immunodeficiency syndrome prevention education over the 30-day period prior to work release placement. All 620 subjects will be followed up at the completion of work release and at two subsequent intervals of 6 and 12 months after work release fulfillment. At each followup point, all 620 subjects will receive HIV and urine testing as well as questionnaire reassessment about drug use, criminal activity, and HIV risk behavior.

Finally, since the *Key* TC has been in operation since 1988 and many of its initial clients graduated to conventional work release prior to formal intake at CREST, the opportunity exists to make comparisons between a one-stage model of TC intervention (prison-based TC only), a two-stage model (CREST plus the outpatient phase for CREST graduates), and a three-stage model (prison TC plus CREST and post-CREST outpatient counseling).

Specific recommendations for either treatment or research are impossible at this juncture. However, the findings from the study, of which CREST is the treatment component, promise to provide concrete data on the impact of treatment on both drug use and on criminal activity. This research also will produce knowledge on the TC process, providing a better understanding of what goes on in a TC and who benefits most from this type of treatment. This information is necessary in order to expand and improve treatment for drug-involved offenders. Without increased and improved treatment opportunities, the trend toward warehousing criminals will continue, resulting in increased recidivism rates, larger prison populations, and, eventually, more prisons.

NOTE

1. The *Key* TC was established in Delaware's Multi-Purpose Criminal Justice Facility during July 1988. Initially funded through a Bureau of Justice assistance grant and currently supported by the State of Delaware, the program houses 70 men in a section of this maximum-security facility that is totally isolated from all other inmates. Residents of the program must be within 18 months of parole eligibility or work release in order to enter the *Key*, and the treatment regimen is similar to that of most community-based TCs (Lipton and Wexler 1988).

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Clinical Issues in Therapeutic Communities

Jerome F.X. Carroll

INTRODUCTION

The initiative exercised by the National Institute on Drug Abuse (NIDA) in bringing together researchers who have conducted studies in therapeutic communities (TCs) with TC administrators and clinicians is a very encouraging sign that the recent hiatus in generating significant research studies specific to TCs may end. Even more exciting is the possibility that future studies undertaken with NIDA support would entail a similar collaborative effort at *every* level, including: (1) the framing of relevant and important research questions; (2) the identification of existing data and the generation of new data for study; (3) the identification and selection of appropriate instruments and strategies for acquiring the desired data; (4) the design and implementation of the study in order to minimize any program disruptions or negative impact the study might have on clients (researchers still will be responsible for statistical design and analysis of the data); and (5) the interpretation of the data.

NIDA needs to continue this initiative by fostering greater contact between researchers and TCs. Too often, research initiatives are fairly well formulated by the time researchers contact a TC—usually for subjects. At that point, it is too late to make meaningful suggestions regarding design modifications, nor is there much meaningful dialog about instrumentation or the interpretation of findings. Hence, many past research efforts have failed to realize their fullest potential to enlighten the field, to sharpen conceptions of addiction and rehabilitative practices, and to point the way for future studies.

Regarding future technical reviews, the author suggests that the conference format could be modified so that the TC administrators and clinicians are afforded "more air time" and are consulted earlier in the discussion process. In addition, both researchers and TC people need to be more aware of their jargon. Jargon is a major impediment to good communication and collaboration. With very few exceptions, technical concepts can be translated into commonly understood language.

At another level, collaboration also should include the involvement of the National Institute on Alcohol Abuse and Alcoholism and the National Institute of Mental Health, since the overwhelming majority of TC clients abuse or have abused alcohol and as a consequence have experienced considerable emotional distress—both as a precursor to addiction and as a consequence of their addiction.

The concern and suggestions cited above are equally salient with respect to program evaluation. There is a very strong concern within the TC field that various external powers will impose impossible or irrelevant program evaluation standards on TC programs. The TC field is neither adverse to nor afraid of evaluation and fully understands that such evaluations are necessary and even desirable. However, to achieve a mutually agreed upon goal of quality program evaluation, there must be collaboration between the regulatory/funding authority and the programs in framing the goals, criteria, and procedures to be employed in evaluations as well as in determining the training, selection, and qualifications of those who would carry out the evaluations.

TCs are unlike any other variety of human services delivery systems. Their uniqueness needs to be reflected in program evaluation standards, and the fashioning of such standards can only be accomplished through thoughtful, collaborative efforts. Nothing would be more detrimental to those who are struggling to deliver quality services to a difficult and demanding clientele under conditions of diminishing resources and support than to have seemingly irrelevant or impossible standards set by what appear to be unconcerned, insensitive, and misinformed regulatory authorities.

GENERAL OBSERVATIONS REGARDING CLINICAL ISSUES

First and foremost, some very fundamental questions need to be answered by well-designed and executed studies. For example, there is considerable diversity among the Nation's TCs, although "at the core" they share a common philosophy of addiction and recovery and employ similar clinical interventions. During the technical review, Dr. George De Leon provided a list of common elements that characterize and define a TC. Regardless of what TCs do or do not have in common, it is imperative to acknowledge the tremendous changes that have taken place in TCs over the last decade. However, TCs have not uniformly adapted to these changes. A survey of the TC field needs to be done in order to

ascertain the guiding principles and practices that currently distinguish this field.

Generally, it is acknowledged that the field has become "more professional." Typically this means that more traditionally trained and educated professionals now work, in one capacity or another, in TCs; however, the extent and nature of their integration is not known. Becoming more professional also has other meanings, including the establishment of traditional and customary uniform personnel practices, fiscal accountability, quality assurance, utilization and review, case conferencing, interdisciplinary team work, program evaluation, employee assistance programs, continuing education requirements, staff development and training programs, and so forth. To what extent have TCs adopted such practices? It simply is not known.

Another fundamental question is *"Who is being treated?"* Again there is an enormous breadth and diversity of clients being treated in TCs, which reflects, in part, the great differences in the formal and informal admissions standards employed by TCs. Some TCs admit pregnant women—others do not; some admit mentally ill chemical abuser (MICA) clients—others do not; some admit human immunodeficiency virus (HIV)-positive clients—others do not; and some admit clients with physical disabilities—others do not. To complicate matters further, even when certain TCs claim not to be admitting a particular type of client (e.g., a MICA client), they may be admitting them without really knowing it. A careful survey of just whom TCs are serving is needed.

A related fundamental question is *"How much treatment is needed?"* Most reports at the technical review indicated a strong, positive correlation between length of stay (LOS) in TC treatment and positive treatment outcomes. However, some adjustment in understanding and applying this precept as an article of faith is needed. Many cases abound that indicate that individuals who have completed a full course of TC treatment, including graduation, and then relapsed, would benefit from a relatively shorter LOS in residential treatment. Furthermore, the LOS concept needs to be broadened to include outpatient and self-help involvement. Finally, without more care in assessing client characteristics—type, severity, and duration of addiction; co-morbidities; problems-in-living; and the variety of treatment experiences, including frequency, duration, and an indication of who delivered the service and the quality of that service—the field cannot advance much beyond enunciating that LOS is an important consideration in recovery.

"What treatment/rehabilitative services and healing experiences are taking place in TCs?" is another question to be addressed. Besides basic community/focus meetings, confrontation, emotionality (groups that focus on feelings), extended sessions, marathons, and work assignments and tasks, there are many "adjunctive" services now available in TCs. However, there is little indication of their nature and utilization. A cursory list of some recent "add-ons" would include: relapse prevention, incest survival, grief, and relaxation groups; assertiveness training; human sexuality; and social skills groups. Specialized services also available in some programs include psychiatry, psychology, recreation therapy, remedial education, vocational rehabilitation, on-the-job training, legal counseling, medical and nursing services, and family therapy.

A number of TCs have devised special programs for special populations (e.g., MICAs, gays and lesbians, Vietnam veterans with post-traumatic stress disorder (PTSD) co-morbidity, women, women with children, and adolescents). Most such programs segregate these special population clients from other substance abusing clients. Other TCs "mainstream" these special populations; that is, they are mixed in with the general population except for the times they receive special services designed to meet their unique needs. Which approach works best for whom, in what type of TC? Research and program evaluation studies are needed to answer these questions.

To complicate understanding of the healing power of a modern TC even more, when residents are asked what one thing most helped them on their way to recovery, they often answer, "my peers." This is a humbling experience for anyone who tends to think that it is primarily the work, dedication, and skills of the TC staff that make the vital difference.

Another recent development of note is the fact that more recovering substance abuse counselors are returning to school to obtain traditional academic and professional degrees. Thus, when research tries to explore the relative contribution of "having been there" versus professional education and training, the question becomes both more difficult to answer and less relevant.

CO-MORBIDITIES AND MULTIPLE SUBSTANCE ABUSE

Today the convoluted nature of addiction is routinely acknowledged. Once drinking alcohol was given little attention or even condoned and

encouraged; now nearly everyone appreciates the great risk of alcohol abuse and alcoholism associated with recovering addicts' attempting social drinking. There also is growing recognition of the significance of early periods of alcohol abuse; the use of alcohol as a substitute drug for one's "drug of choice"; the use of alcohol to boost, balance, counteract, or sustain the effects of another drug; and the major role that alcohol plays in relapse, especially during the early stages of recovery. More research is needed to document and clarify the interplay between alcohol and drug abuse.

Multiple substance abuse is the rule, not the exception (Carroll 1980; Carroll et al. 1980; Carroll and Ottenberg 1982). Programs should not gear treatment to confronting a single drug of abuse or drug abuse category; this principle applies for both drug-free and methadone-maintenance programs. For example, drug programs need to be capable of treating drug addicts who abuse alcohol; methadone-maintenance programs must be able to address the abuse of both alcohol and drugs other than opioids. The impact of the extent to which programs address this phenomenon needs to be examined.

Co-morbidity also is a fact of life; most substance abusers present with one or more additional physical or mental disorders at admission. Although a number of researchers have addressed this issue within specific programs, few have investigated the array of co-morbidities across programs and across regions. This task needs to be accomplished.

Are clients "sicker" today than in the past? Physically, there can be no question about the answer; acquired immunodeficiency syndrome (AIDS) would force an affirmative answer. With respect to psychological distress, however, the answer is more ambiguous. Some researchers have suggested that today's clients are more distressed. The author's clinical experience suggests that clients have remained more or less the same, which does not diminish the significance of the other position, since both positions acknowledge considerable levels of psychological distress (see table 1). Unfortunately, this question is hard to answer via research studies, since historical data regarding psychopathologies are not readily available or easily accessible.

In three survey studies (Carroll et al. 1982; Carroll and Klein 1974; Jainchill, personal communication, 1989-90) that employed the Tennessee Self Concept Scale (TSCS) (Fitts 1965) to assess the extent of unhealthy self-concepts among addicts in residential treatment, it was

TABLE 1. *Comparative findings of psychopathology among substance abusers, 1977-1991*

Diagnoses	Sobel (1977)*	Carroll (1986)**	Carroll (1988)***	Carroll (1991)+
Personality Disorders	72%	79.6%	64%/72% (1°/2°)	30%/45% (1°/2°)
"Neuroses"	16%	—	14% (90% Dysthymia)	26% Dysthymia 14% PTSD
Schizophrenia	4%	4.4%	—	2%
Affective Disorders	3%	8.8%	7.2% Major depression in remission	4%
Impulse Control	—	2.2%	4.3%	7%
No Diagnosis	20%	2.2% (Client left after 1 day)	3% (Another 7%, 5 subjects, left before screening)	10% (38 subjects)

KEY: * All admissions to Eagleville Hospital in 1977, unpublished study; ** Eagleville Hospital's Continuum Program (45 subjects), unpublished study; *** Project Return Foundation's (PRF's) entire Orientation Program (69 subjects), unpublished study; + All clients in PRF's Residential Drug-Free Programs ≥ 21 days LOS (372 subjects), unpublished study.

observed that the mean Total Positive Scores consistently fell within the same clinical level of psychopathology (see figure 1); that is, between the first and second standard deviations below the mean or between the 10th percentile and 5th percentile. It is interesting to note that in the survey by Carroll and colleagues (1982), the lowest mean Total Positive Score ($T = 32$) was obtained by clients who mainly abused alcohol and secondarily abused drugs. If one extends the meaning of co-morbidity to include nonphysical defects that impair functioning, such as major reading, writing, and calculating deficiencies and inadequate work skills, attitudes, and little or no legitimate work experience, the need for a near total restructuring of clients' values, beliefs, feelings, and behaviors becomes obvious. Considerably more research is needed to assess the full impact of various co-morbidities on the treatment of addiction.

SOME CONCLUSIONS

The above observations call for comprehensive, holistic treatment programs in TCs; that is, programs that employ multidisciplinary teams capable of delivering individualized, effective, and high-quality treatment. It is necessary to know the extent to which such programs are available in the TC field. Furthermore, if such programs exist, it is important to examine how harmoniously and effectively the various components (discipline and treatment modules) are integrated and how effective this treatment is in addressing the individual treatment goals and objectives of clients.

The author advocates turning to the organization and development field for measures of leadership style, a sense of shared mission, communication styles, decisionmaking systems, employee morale and burnout, and program flexibility and adaptability. These program or ecologically oriented variables exert tremendous influence on the effectiveness of treatment and thus affect outcome. Research is desperately needed in this area.

The author recently received a copy of Operation PAR's Community Orientation Program Environment Scale. This scale measures the following variables: involvement, support, spontaneity, autonomy, practical orientation, personal problem orientation, clarity, and staff control. This instrument is attuned to TC life and therapeutics, and it illustrates the type of instrumentation that can be employed to do ecologically oriented research.

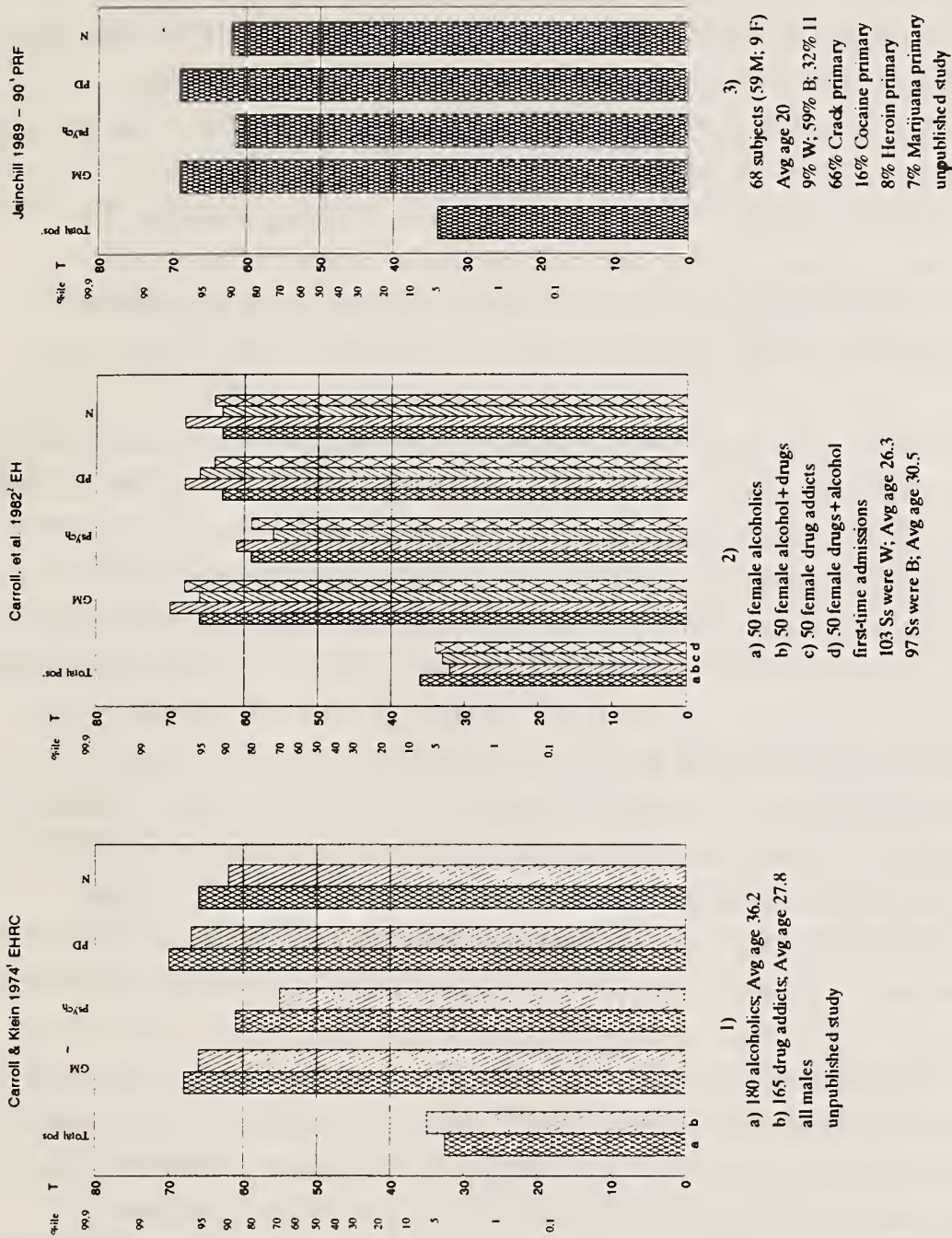


FIGURE 1. Tennessee Self Concept Scores of chemically dependent persons across three decades

It is critically important to demonstrate the value of treatment and that treatment works. Although some tentative steps have been taken in this regard, they are not enough. Everyone in the substance abuse field is continually asked: "What is your success rate?" Each individual struggles to find a "sound bite" answer to this very complex question, mainly because those who ask this question often have too little time or patience to hear what is said, or their experience with addiction is too limited to appreciate a careful, thoughtful, and honest reply. The former director of the Office of National Drug Control Policy, Bob Martinez, clearly stated this priority during an interview: "I happen to believe there is a future in treatment, but I also believe we're going to have to do a better job of quantifying it to sell it to those who are in a position of providing either private or public funds" (Martinez 1991, p. 2).

What constitutes "success" in this field? How does a TC administrator determine how well his or her program is doing in delivering the services that clients most need to successfully rehabilitate their lives? The TC field, at least, has come to appreciate that success or failure cannot be equated in some *simplistic* way with any *absolute* measure of total and permanent abstinence. It is a well-known fact that a very high percentage of clients will attempt some form of "controlled use" of psychoactive substances (usually alcohol and/or marijuana) at some point after completing treatment. To assess treatment success or failure, therefore, it is necessary to take account of the client's life circumstances at the time he or she begins using again, as well as whether he or she has been involved in any form of aftercare treatment (e.g., Alcoholics Anonymous (AA), Narcotics Anonymous (NA), or informal continuing contact with TC treatment staff) prior to relapsing. In considering any relapse as an indicator of treatment outcome, the nature, extent, severity, and duration of the relapse also must be considered. The author argues that someone who begins to use again, experiences distress connected with this use, and within a matter of hours or days calls his or her NA/AA sponsor or former TC counselor to get help and as a consequence resumes his or her abstinence is a "success."

The author believes that even the view of "dropouts" is beginning to become less absolute. For example, Dr. Benjamin Lewis, at NIDA's technical review, reported that all dropouts are not the same; that is, they do not all suffer the same negative fate. Some individuals apparently do better than others after dropping out of treatment. This coincides with the author's experience at Project Return, where some dropouts seem to be holding down jobs, attending NA groups, and self-reporting abstinence.

The author also believes that TC administrators, clinicians, and researchers need to develop intermediate outcome measures as well as completed outcome measures of treatment success. At Project Return, Behavioral Criteria (BC) are utilized for each of the TC levels. The BCs spell out in clear, concise language what behaviors are expected from the client at each level. The client's counselor rates the client every week in orientation and every other week in the other levels by using a simple five-point scale, where a rating of one indicates poor progress and a rating of five indicates excellent progress. Clients remain in a level until their overall (average) rating is three for the criteria for that level.

Other intermediate outcome measures that could be tapped include advancing a grade level in remedial education, obtaining a General Equivalency Diploma, completing a vocational training course, obtaining a job (noting weekly or monthly wages earned and taxes paid), noting the number of level movements achieved, the number and percentage of clean urines taken, and the number of drug/alcohol-free days on days-at-risk. At NIDA's technical review, Dr. Lorand Szalay (1983) described one such measure, the Associative Group Analysis, which could be used for either an intermediate or completed outcome measure.

An indepth, carefully planned national study of life after formal treatment ends is desperately needed. Research staff need to be recruited to go into the communities where former clients live and assess what is happening to them in their communities as well as in their families, on their jobs, or at their schools. In such an undertaking, multiple measures over time are needed across both personal and environmental variables.

New models of addiction and recovery also need to be developed. The old disease model, while an improvement over the concepts of sin, crime, and lack of willpower, is woefully insufficient for use in the next decade and next century. The author has advocated that the addictions field adopt and promulgate an "ecological dysfunction" model (Carroll 1975). This model can be expressed by the following formula:

$$B = f(P \leftrightarrow E).$$

Behavior (B), such as becoming addicted or recovering from an addiction, is a function (f) of the reciprocal influence (\leftrightarrow) of person (P) variables (e.g., genetics, diet, physiology, learning, and personality) and environmental (E) variables (e.g., substance abuse in the family, poverty,

racism, sexism, dysfunctional family relationships, job stress, and neighborhood norms regarding substance use and abuse).

Significant environmental influences often are neglected in research design, most likely because they are not very amenable to manipulation or tight statistical control. Moreover, policymakers know full well that the "solution" to a problem, such as addiction, would be simpler if it could be demonstrated that something "wrong" in the person was the real cause of the problem. This may explain why medically oriented research tends to get the lion's share of the research dollars. In conclusion, NIDA's initiative is to be commended—provided that subsequent collaborative meetings occur to advance the process begun in this technical review.

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Therapeutic Community Research and Practice: Recommendations

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INTRODUCTION

The technical review meeting from which this monograph resulted was convened to accomplish several objectives. These objectives included the systematic review of existing research on therapeutic community (TC) treatment and development of a set of recommendations for future research. It is important to note that while the emphasis of the meeting was on treatment research, this research cannot be carried out successfully without the active cooperation of the clinicians and administrators who are responsible for the direction of treatment and who will ultimately make the decisions on how research findings are implemented. Researchers who do not understand and respect the legitimate interests and concerns of providers risk losing both the cooperation necessary to conduct research and their own ability to properly frame the most meaningful research questions. Just as the most productive approach to conducting and applying research in TCs entails partnership among researchers, clinicians, and administrators, the identification of research questions and priorities also must involve all three.

Thus, the recommendations that follow are based not only on the state of the research, but also on the consensus reports from three panels who participated in the meeting: the research panel, the administrative panel, and the clinician panel. The two latter panels, which were composed of invited discussants (i.e., directors of TC programs and key clinical staff from programs), were asked to identify issues of research having the greatest potential applied significance from their own perspectives. The three panels then were asked to develop recommendations based on the existing state of knowledge, major gaps in knowledge, needs of the field, and strategies for improving both knowledge and its application to treatment. They also were asked to consider requirements for developing an environment to foster research and utilization of research to improve treatment in TCs. Further recommendations are identified in the individual chapters in this volume, and some of these have been included

in the following summary. In general, however, the more subject-specific recommendations are found in the individual chapters.

RESEARCH FOCUS

1. Continue to research treatment outcome, both in large studies such as the Drug Abuse Treatment Outcome Study (DATOS), and in program-based and collaborative studies.
2. Conduct research on process and outcome in an orderly way, building a systematic body of knowledge. Clarification of treatment process is now possible because of treatment outcome studies that have been completed. Process studies should focus on better definition of the treatment process and development of measures and instrumentation. Studies should include measures that enable researchers to relate changes in client functioning to stages of the treatment process and the underlying model of TC treatment. Issues to be investigated include: (1) staff characteristics which predict program effectiveness; (2) essential program components that are critical to achieve successful posttreatment outcome; (3) the importance of TC concepts such as self-disclosure and peer role models; and (4) client satisfaction.
3. Research should be undertaken to better characterize client populations in terms of problems, needs, barriers to treatment entry and retention, and perception of the treatment process.
4. Research should focus on the individual's recovery process, both in treatment and in the long run.
5. The extent to which the current, diverse array of TC-oriented programs is guided by the perspective and purposeful use of community as the primary method should be evaluated.
6. Analytic models to determine the effects of global interventions in dynamic interaction with a changing client are needed.
7. Research is needed to develop and evaluate the efficacy of assessment protocols that guide client-treatment matching strategies. There is a corollary need to identify the relative contribution of self-selection factors to the change process.

8. New models of addiction and recovery are required. An "ecological dysfunction" model that views behavior (e.g., becoming addicted or recovering) as a function of the reciprocal influence of personal and environmental variables may be more helpful than the disease model.
9. Research on treatment of special populations is needed. While the number of special populations is potentially large, the following are noted as being of key interest: (1) criminal justice clients, including prison-based programs; (2) mentally ill chemical abuser (MICA) clients, including studies of treatment in mainstream versus specialized TC facilities; (3) ethnic subgroups; (4) women of childbearing age; (5) adolescents; (6) children of clients in treatment (both those in treatment with mothers and those apart from mothers); (7) homeless clients; and (8) human immunodeficiency virus (HIV)-seropositive clients.
10. Research should consider the role of settings and program variations in which TC programs are found, including prisons and jails, public housing, hospitals, school-based programs, culture-specific locations (e.g., Native American reservations), and the application of TC models in day-treatment and outpatient settings.
11. Continuing studies of retention and time in treatment are needed to: (1) clarify self-selection and program-selection issues; (2) measure the recovery process in relation to time in treatment; (3) clarify and measure the acculturation process in relation to retention and recovery; (4) improve prediction of early dropout and develop interventions to improve retention in treatment; (5) evaluate the relationship between planned duration or recommended length of treatment to retention in treatment; (6) determine the impact of improved retention from the perspective of the treatment provider, the payor, and the consumer; (7) continue to examine the relationship of stages or levels of client motivation or coercion on retention; and (8) assess the retention rates and outcomes of individuals with or at high risk of HIV in TCs.
12. Studies to improve treatment process might include: (1) issues concerning assessment and selection; (2) definition of essential elements of TCs, their application, and their effectiveness in particular settings; (3) innovations in treatment, for example, the addition of relapse prevention components or inclusion of appropriate medication protocols; (4) assessment of training in TC methods as an

intervention to improve implementation of TC treatment and subsequent client outcomes; and (5) assessment of how TCs can best provide medical and other services to their HIV-infected clients and the effects of such services on the rate of progression to AIDS and survival.

13. To facilitate the treatment of MICA clients in TC programs, the modality must be appropriately modified. A characterization of psychiatric subtypes needs to be developed to distinguish individuals according to those who are primarily drug abusers with accompanying psychopathology from those whose primary symptomatology is psychiatric with accompanying drug abuse. This includes examining the association among temporal order, psychiatric "type," and symptom pattern (e.g., severity).
14. The significance of personality disorders in TC treatment is recognized. The role of antisocial personality in the recovery process, particularly the differentiation of childhood and adult features, requires clarification.

METHODS AND STRATEGIES

1. Match research designs and methods most appropriate to the questions being investigated and the level of inquiry. Research designs should be those that are capable of yielding valid findings, and that allow appropriate choices by clients and staff. Knowledge proceeds in stages; thus, a given design may only be appropriate after preliminary questions have been addressed.
2. Review existing databases to identify opportunities for secondary analyses and elaboration of existing knowledge.
3. Review program-based data archives to identify potential populations for followup studies and opportunities to develop new databases.
4. Develop a national TC database that could be a major research resource and provide a highly leveraged means of advancing knowledge about treatment.
5. Provide support for training of researchers (i.e., cross-training in TC methods) so that measurement and findings are valid.

6. Provide cross-training of clinical, administrative, and research staff to strengthen the commitment of TC programs to research and to facilitate utilization of research findings.
7. Implement collaborative research projects among TCs.
8. Identify program-based evaluation capability in TCs as a major goal of the TC movement. TC management should commit to routine evaluation, development of familiar measures, and communication of results to clinical and administrative directors and staff.
9. Emphasize technology transfer models to improve the application of research findings to treatment.

RESEARCH RESOURCES

1. Establish regional research centers for TCs similar to the Center for Therapeutic Community Research, which was established under the National Institute on Drug Abuse (NIDA) sponsorship following this review. These centers should emphasize research, training, and developing relationships with treatment programs and academic departments.
2. Develop a national TC database, as described above in the *Methods and Strategies* section.
3. Continue national conferences on TC research, either under the auspices of NIDA or the Therapeutic Communities of America (TCA).
4. Develop a structure to facilitate the dissemination of research findings for clinical practice within the TC modality (e.g., utilization of TCA quarterly meetings and provision of feedback mechanisms from the clinical to the research community concerning the use of research recommendations).
5. Continue to consult clinical and administrative workgroups on a regular basis; TCA should constitute these workgroups and invite non-TCA member participation.

RESEARCH AND PRACTICE

While specific practice recommendations are beyond the scope of this chapter, the recommendations for research focus, methods and strategies, and resource development presented earlier were developed with the intention that research address the needs of practice as well as science. Numerous questions that directly confront those who must administer programs and who design and deliver treatment can be systematically addressed by research. Examples of these questions, which have been addressed in individual chapters of this monograph, include intended length of treatment, retention in treatment, treatment process, feedback on treatment effectiveness, treatment of clients with co-occurring mental disorders, treatment of women with children, treatment of clients in the criminal justice system, and HIV-related issues.

The administration, design, and delivery of treatment can be improved by research, but the individuals and organizations that deliver treatment services must be partners in the enterprise. They should share in the responsibility for: (1) helping to identify those research questions that have both immediate, practical significance and long-term value for the TC and other modalities; (2) developing an understanding of the requirements for appropriately implemented research and assisting researchers in successful implementation of projects; (3) becoming partners with researchers in developing and implementing research strategies, so that the validity and focus of the studies are appropriately ensured; (4) routinizing the collaboration with researchers and the collection of data for both studies and ongoing evaluation; and (5) developing mechanisms for dissemination of research findings and working with researchers to translate these findings into useful recommendations for practice.

Some of these initiatives to link research and practice can be carried out between programs and researchers or by researchers within programs. On a broader scale, organizations such as TCA can do much to improve collaborations with researchers. Finally, the TC movement should strive to encourage research in its own community and to develop a larger cadre of researchers trained in the TC perspective.

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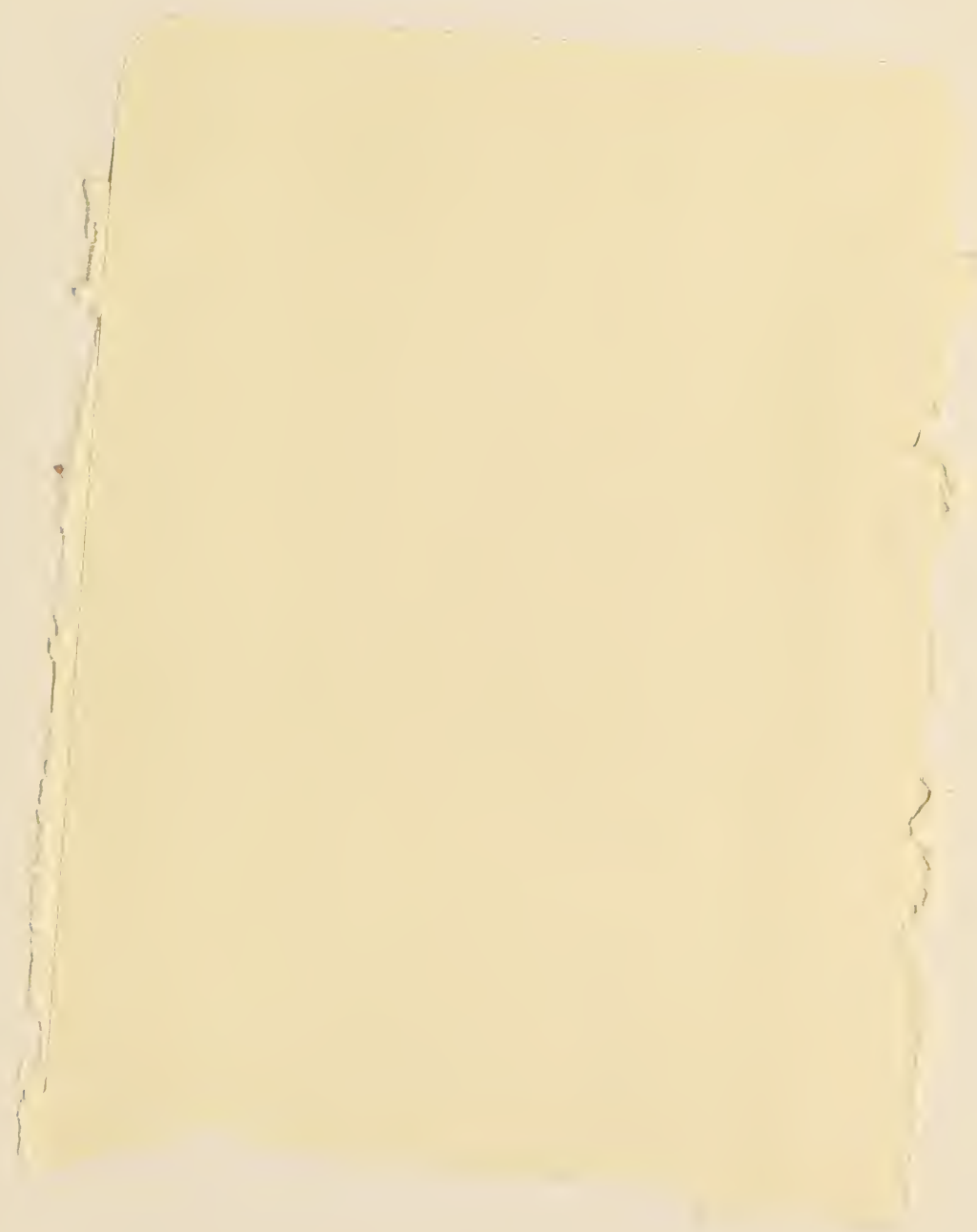
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